

**Summary Packet**  
**Vertical Profile Boring 132**

**NWIRP Bethpage**  
Bethpage, New York



**Naval Facilities Engineering Command**  
**Mid-Atlantic**

**Contract No. N62470-08-D-1001**  
**Contract Task Order WE62**

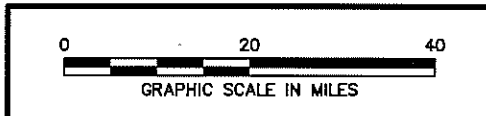
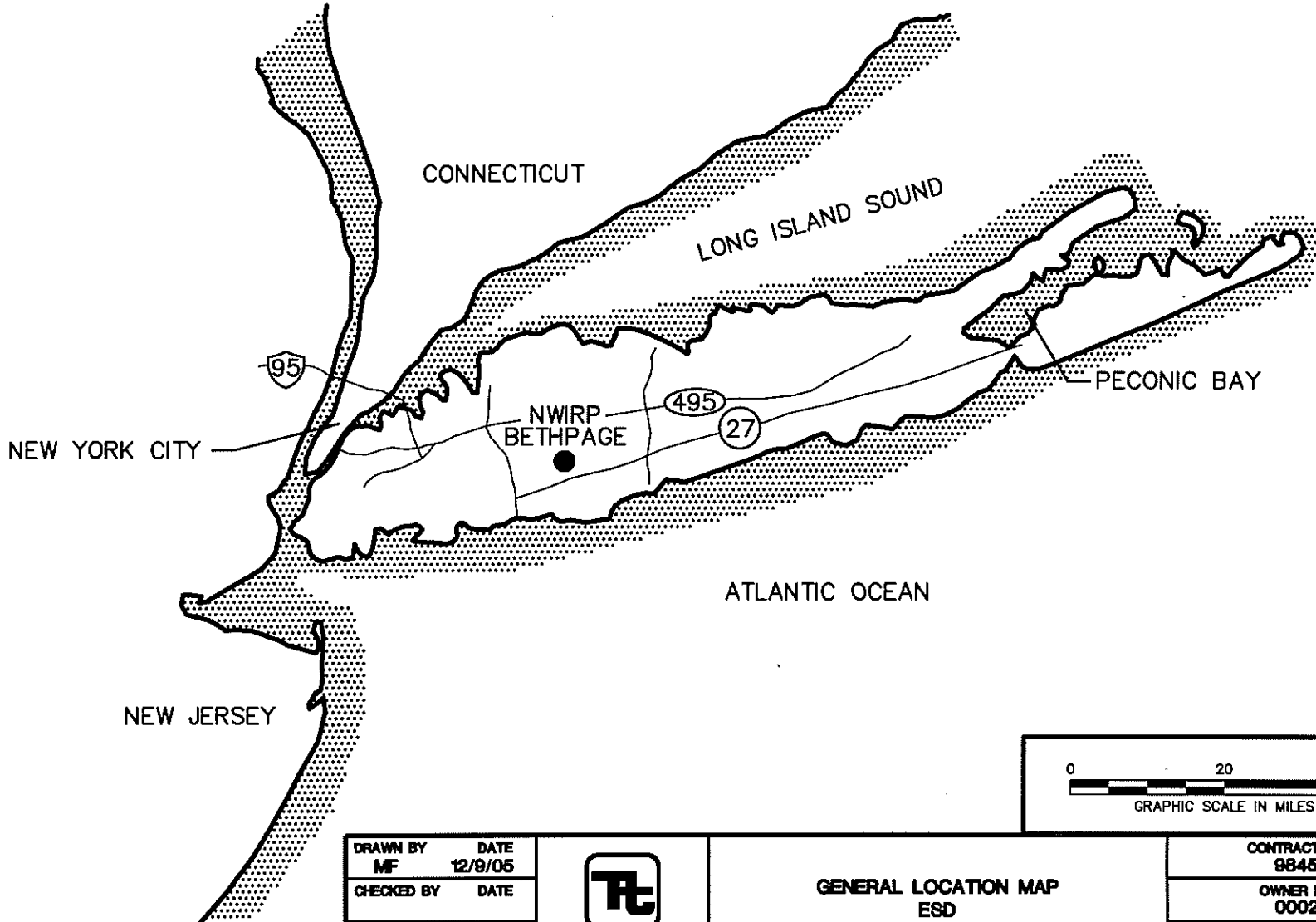
July 2012

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## **Section 1**

### **Figures**



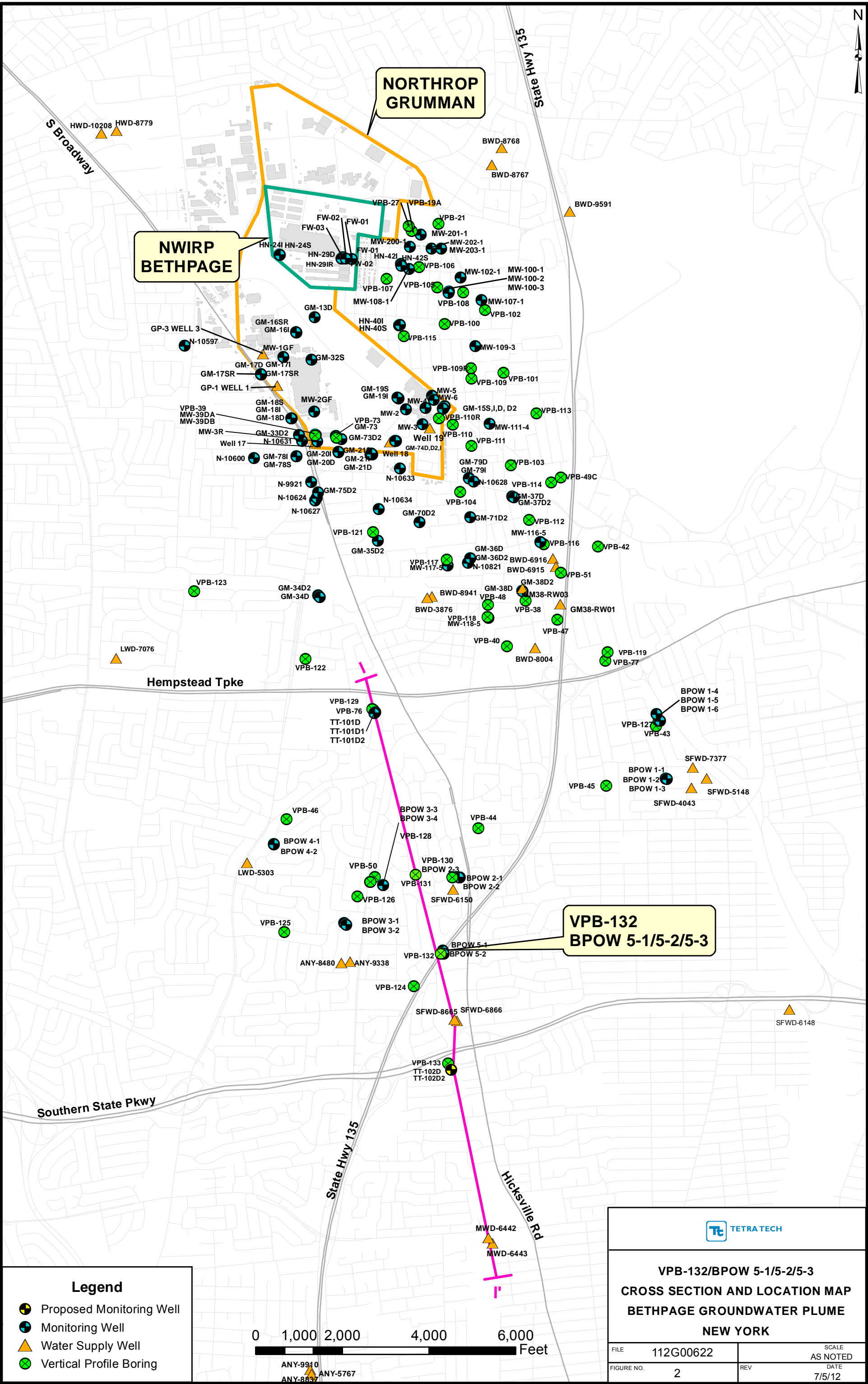
DRAWN BY	DATE
MF	12/8/05
CHECKED BY	DATE
REVISD BY	DATE
SCALE AS NOTED	



GENERAL LOCATION MAP  
ESD  
NWIRP BETHPAGE  
BETHPAGE, NEW YORK

CONTRACT NO. 9845	
OWNER NO. 0002	
APPROVED BY	DATE
DRAWING NO. FIGURE 1	REV. 0





**NORTHROP GRUMMAN**

**NWIRP BETHPAGE**

**VPB-132  
BPOW 5-1/5-2/5-3**

**Legend**

- Proposed Monitoring Well
- Monitoring Well
- Water Supply Well
- Vertical Profile Boring

0 1,000 2,000 4,000 6,000 Feet



**VPB-132/BPOW 5-1/5-2/5-3  
CROSS SECTION AND LOCATION MAP  
BETHPAGE GROUNDWATER PLUME  
NEW YORK**

FILE	112G00622	SCALE	AS NOTED
FIGURE NO.	2	REV	DATE
			7/5/12



**Section 2**

**VPB 132 Boring/Gamma Logs**



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 1/18/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
	0				DENSE	YELLOW BRN	F/C SAND		DAMP					0
							TR TO SOME GRAVEL		GW SUB ROUND GRAVEL					
	10						SAME							
	20						SAME							0
	30						SAME		MOIST					
	40						SAME							0
									SET 8" CAS TO ~ 56' BGS					
	50													

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: SET 8" CAS W/ CAS. HAMMER. THEN 8" MUD ROT TO BSTM

Drilling Area Background (ppm): 0

Converted to Well: Yes  No  Well I.D. #: VPB-132





# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 1/24/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or ROD	Depth (Ft.) or Run No.	Blows / 6" or ROD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole*	Driller BZ**	
	50				DENSE	BRN	SAND (F/M) TR GRAVEL	SP SM	WIET					0
	60						SAME		TOOK					
S-1 e 1015	61								[BP-VPB132-] [GW-061]					
	70						SAME							0
	80						SAME							0
	90						SAME							
	100													

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm):

Converted to Well: Yes \_\_\_\_\_ No  Well I.D. #: VPB-132



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 11/24/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)									
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**						
	100																		
					DENSE	BRN	SAND (F/M) TR F GRAVEL	SP	WET										0
	110						SAME												
S-2	120						SAME		TOOK										
e 1330	121								[BP-VPB132- GW-121]										0
	130						SAME - MORE GRAVEL		BASED ON DRILL CUTTINGS										
	140						SAME												0
	150																		

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area

Background (ppm):

Converted to Well: Yes \_\_\_\_\_ No  Well I.D. #: VPB-132





# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 1/25/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	200				DENSE	FRN	SAND F/M -TR F GRAVEL	SM SP	WET				0
	210						SAME						
S4 1350	220 221						SAME		TOOK [BP-VPB132-] GW-221				0
	230						SAME						
S5 1600	240 241						SAME - TR CLAY		TOOK [BP-VPB132-] GW-241				0
	250								CLAY ON SCREENS OF HP- DARK GRAY				

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm):

Converted to Well: Yes \_\_\_\_\_ No  Well I.D. #: VPB-132







# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 1/27/12 - 1/30/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)								
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ*					
58	300																	
1/30	301				DENSE	GRAY	SAND (F/M)	SM SP	WET TOOK									0
	310						SAME											
59	320						SAME		TOOK									
1/30	321																	0
	330						SAME											
510	340						SAME		TOOK									
1/31	341																	0
	350																	

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm):

Converted to Well: Yes \_\_\_\_\_ No  Well I.D. #: VPB-132



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 1/31/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
	350				DENSE	GRAY	SAND F/M	SH / SF	WET					0
S11 e 1315	360 361						SAME		TOOK					
									[BP-VPB132-] [GW-361]					
	370						SAME							0
S12	380						SAME		TOOK					
1510	381								[BP-VPB132-] [GW-381]					
	390						SAME							0
	400													

1/31

2/1

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm): 0

Converted to Well: Yes \_\_\_\_\_ No  Well I.D. # VPB-132



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW

BORING No.: VPB-132

PROJECT NUMBER: 112G00622-PHASE II

DATE: 2/1/12

DRILLING COMPANY: DELTA WELL & PUMP

GEOLOGIST: Conti

DRILLING RIG: MUD ROTARY

DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
S13 e 100	400 401	/	/		DENSE	GRAY	SAND (F/M)	SM SP	WET TOOK					0
	410	/	/				SAME		[BP-VPB132-] GW-401					
S14 e 1230	420 421	/	/				SAME		TOOK					0
	430	/	/				SAME							
S15 e 145	440 441	/	/				SAME		TOOK					0
	450	/	/											

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm): 0

Converted to Well: Yes \_\_\_\_\_ No

Well I.D. #: VPB-132



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 2/1/12 → 2/2/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
	450				DENSE	GRAY	SAND (F/M)	SM SP	WET					
	460						SAME		TOOK					
	461						TRACE CLAY		[BP-VPB132-] [GW-461]					
									MORE CLAY PER DRILLER 461 → 465					
	470													
							SAME							
	480								TOOK					
	481						SAME		[BP-VPB132-] [GW-481]					
	490													
							SAME							
	500													

2/1  
2/2

\*When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes \_\_\_\_\_ No  Well I.D. #: VPB-132



# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G00622-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **VPB-132**  
 DATE: **2/2/12**  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)								
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**					
	500																	
S18 2	501				DENSE	GRAY	SAND - (F/M)	SM	WET									0
1435	502		SS-1				SILTY F SAND (SM)	SP	TOOK [BP-VPB132- -GW-501]									
	510						SAME - TR CLAY -		PER DRILLER 510-520									
S19 C	520						SAME		TOOK [BP-VPB132- -GW-521]									0
	530																	
2/3 2/6	520 120	540 541					SAME		TOOK [BP-VPB132- -GW-541]									0
	550																	

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes  No  Well I.D. #: **VPB-132**



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 2/6/12 → 2/7/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S .	Remarks	PID/FID Reading (ppm)									
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole*	Driller BZ*						
	550				DENSE	GRAY	SAND F/M	SMY WET SP											
	560						SAME	TOOK											
	561						- TR SANDY CLAY ~ 3' FEET 561 → 564	[BP-VPB132-] GW-561											
	570						MORE CLAY ~ 571												
2/6	580							TOOK											
2/7	581						SAME	[BP-VPB132-] GW-581											
	590						SAME												

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes \_\_\_\_\_ No  Well I.D. #: VPB-132







# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW BORING No.: VPB-132  
 PROJECT NUMBER: 112G00622-PHASE II DATE: 2/8/12  
 DRILLING COMPANY: DELTA WELL & PUMP GEOLOGIST: Conti  
 DRILLING RIG: MUD ROTARY DRILLER: C. Twigg

Sample No. and Type or ROD	Depth (FL) or Run No.	Blows / 6" or ROD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
	650				DENSE	GRAY	SILTY F/M SAND TR CLAY	SM /SP	WET					0
526 @ 125	660 661			X						NO GW SAMPLE SCREEN EXPOSED ONLY 4" W/ CLAYEY SAND ON BOTTOM PORTION				
	670													
										SAME.				0
527 @ 1435	680 681									TOOK SILTY F/M SAND TR CLAY	[BP-VPB132- GW-681]			
										DRILLER NOTES MORE CLAY 681 → 683 ±	1 VIAL ONLY			
	690									SAME				0
	700													

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes  No  Well I.D. #: VPB-132





# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 2/13/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft) or Run No.	Blows / 6' or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FT) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ*	
	750				DENSE	GRAY	SAND-SOME GRAVEL	SM SP	WET HAD TO THICKEN MUD MIX 750-760 GRAVELLY					0
2/10	531 760						SAME.		TOOK					
2/13	1215 761								[EP-VPB132-] [GW-761]					
									1 VIAL					
	770						SAME - LESS GRAVEL							0
	532 780								TOOK					
	1450 781						SAME - LESS GRAVEL		[EP-VPB132-] [GW-781]					
	790						SAME.							0
	800													

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm): 0

Converted to Well: Yes \_\_\_\_\_ No  Well I.D. #: VPB-132



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 2/14/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)							
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**				
533800																	
1018 801				X	DENSE	GRAY	SAND		WET								
534802					V DENSE	LT GRAY	SILTY F SAND (MOIST → WET)		TOOK BP-VPB132- GW-801 NO SAMPLE RECOVERED								
	810						SAME										
534820									TOOK								
1310 821							SAME		BP-VPB132- GW-821								
	830						SAME										
535840									TOOK								
2/14 2/15 1530 841									BP-VPB132- GW-841								
535842						DENSE	GRAY	SILTY F/M SAND									
0910								TR. F. GRAVEL →	SUBROUND								
	850																

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area

Background (ppm):

Converted to Well: Yes \_\_\_\_\_ No 1 Well I.D. #: VPB-132



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 2/15/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (FT) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	850				DENSE		SILTY F/M SAND TR F GRAVEL TR CLAY	SM SP	WET				0
536 e 1215 SS6	860 861 862				DENSE	GRAY	CLAYEY SAND (POOR REC)		TOOK BP-VPB132-GW - 861 V. TURBID MICACEOUS				
	870												0
SS 7	880 881 1530		1/1		VERY STIFF TO M DENSE	GRAY	TOP 6" - SILTY CLAY TR SAND LENS. TO BOT 6" CLAYEY SAND (WET)	G AY	MOIST NO HP HERE DUE TO CLAY CONTENT				
SS 8	890 891 1800		1/1		M DENSE	GRAY	SILTY F/M SAND TR LIGNITE AT TOP OF SAMPLE	SM SE	WET MICACEOUS (TOC HERE)				0
	900												

\* When rock coring, enter rock brokenness.

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Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm):

Converted to Well: Yes \_\_\_\_\_ No  Well I.D. #: VPB-132





# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G00622-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: VPB-132  
 DATE: 2/21/12 → 2/22/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft) or Screened Interval	MATERIAL DESCRIPTION			U S C S	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole*	Driller BZ*
SS14 C 1300	950 951		0.8/1		DENSE GRAY		SILTY F SAND - TR LIGNITE - TR CLAY	SM	WET  MICACEOUS GOOD SAMPLE MOSTLY SAND BUT FINER THAN SS 13.				
SS15 C 1525	960 961		0.3/5	960	V DENSE GRAY		SILTY F. SAND - TR LIGNITE	SM	MOIST-MICACEOUS SOME PLS CEMENTED AND V HARD NOTICED THAT MICA APPEARED LARGER HERE AND MORE NOTICEABLE				
SS16 C 1140	970 971		7/8	970	V STIFF GRAY		SANDY CLAY - LAMINATED TR SILTY CLAY (CL)	SC	MOIST DID NOT NOTICE ANY LIGNITE				
				974	HARD		CEMENTED SAND? THEN CLAY ↓		HARD DRILLING				
SS17 C 0900	980 981		0.7/1	976	V. STIFF GRAY		SILTY CLAY  V. THIN LAMINATIONS DRILLS LIKE CLAY TO 990 - TR RED BRN CLAY IN CUTTINGS. ~ 988	CL	MOIST DAMP (DRY) IN SHOE OF SPOON. GOOD REC. AND VERY GOOD PC. OF CLAY SAMPLE				
SS18 C 1130	990 991		4/5		V. STIFF RED GRAY		SILTY CLAY	CL	MOIST → DRY DRY BOTTOM OF SHOE.				
SS19 C 1000			0.3/5		V STIFF RED GRAY		SILTY CLAY	CL	MOIST → DRY				

\* When rock coring, enter rock brokenness.

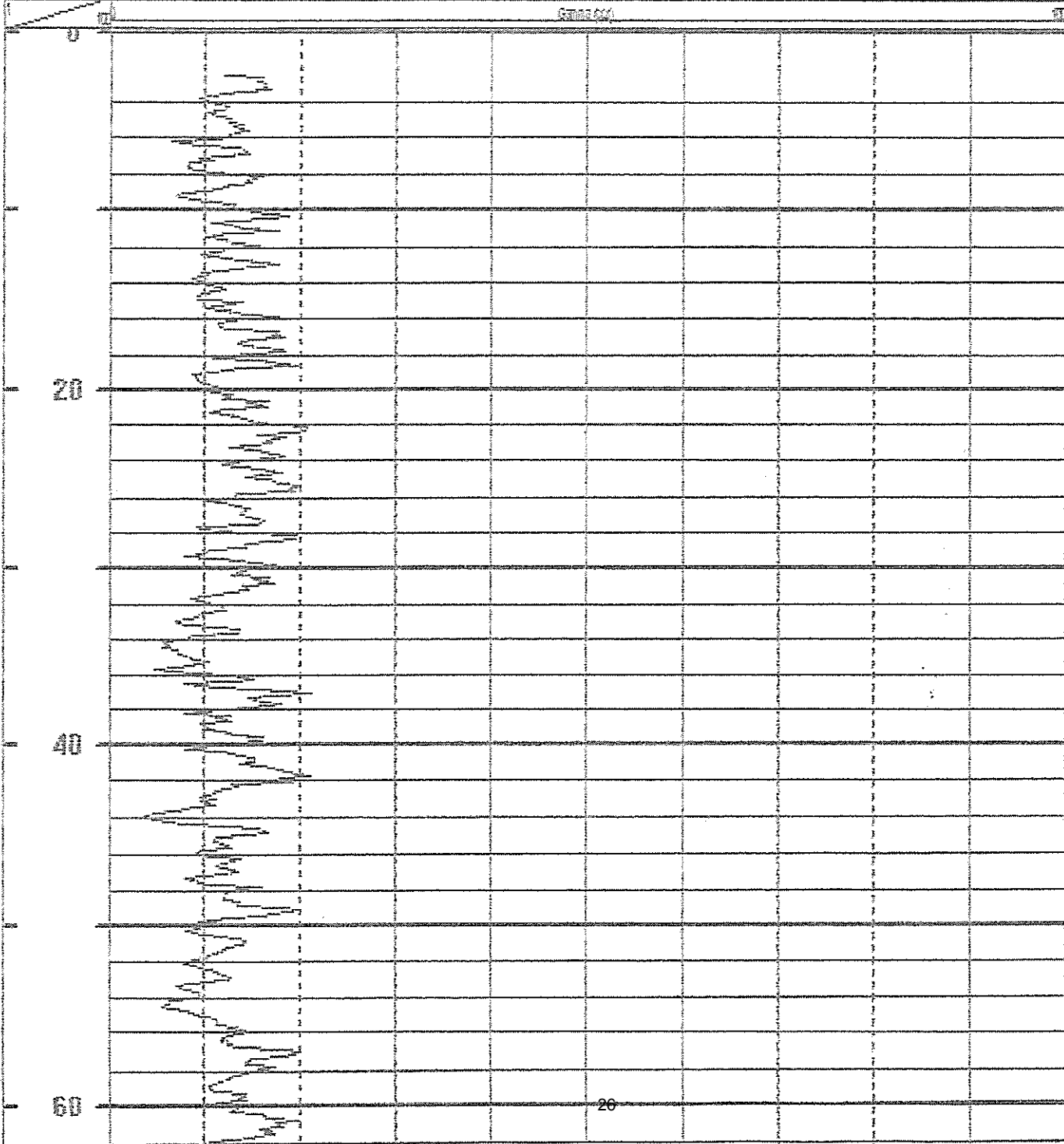
\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: ⊗ RARITAN POSSIBLE START @ 964 -  
CHECK GAMMA LOG WHEN COMPLETE.  
ALSO VSGS WILL LOG ON 2/22/12.

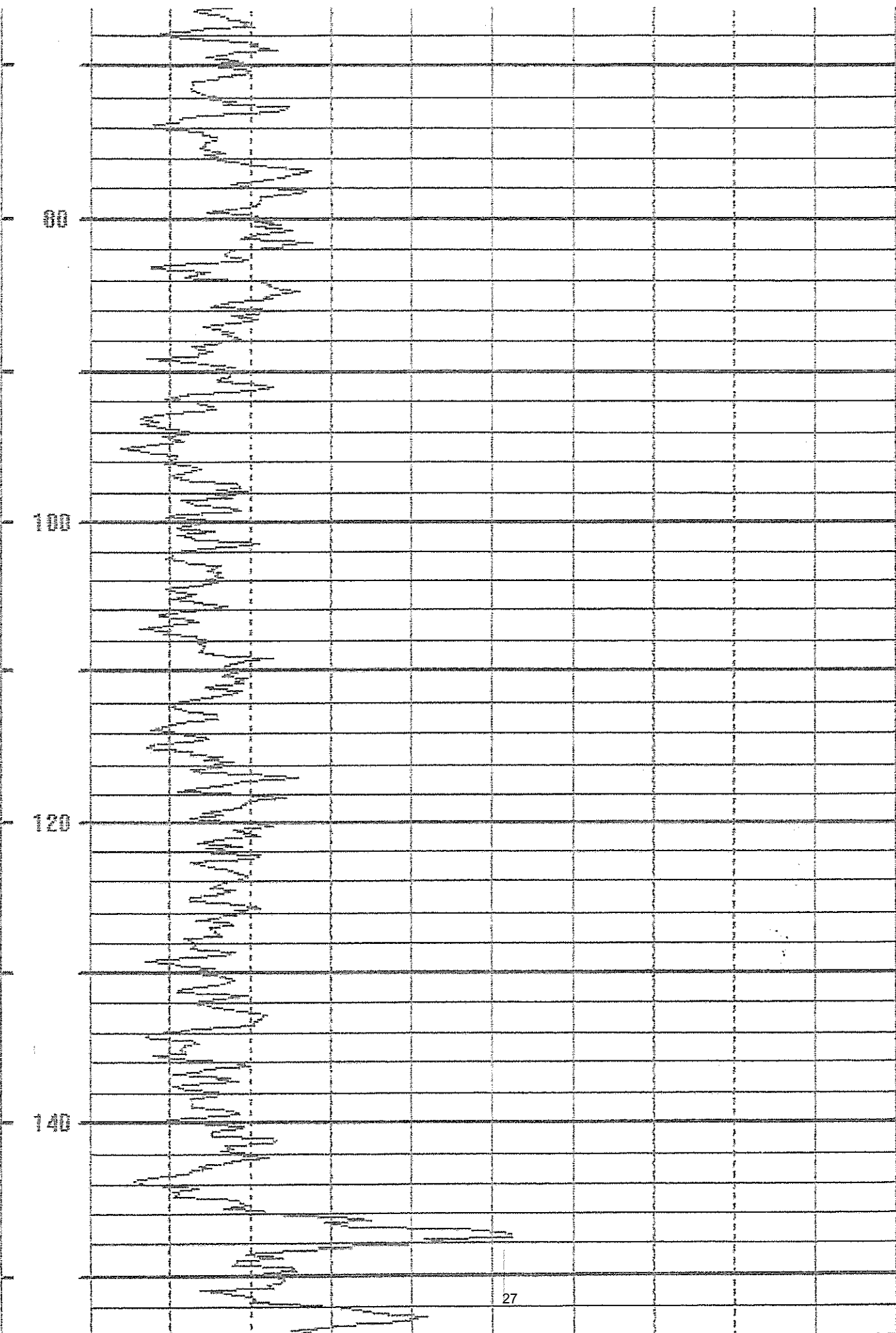
Drilling Area  
 Background (ppm):

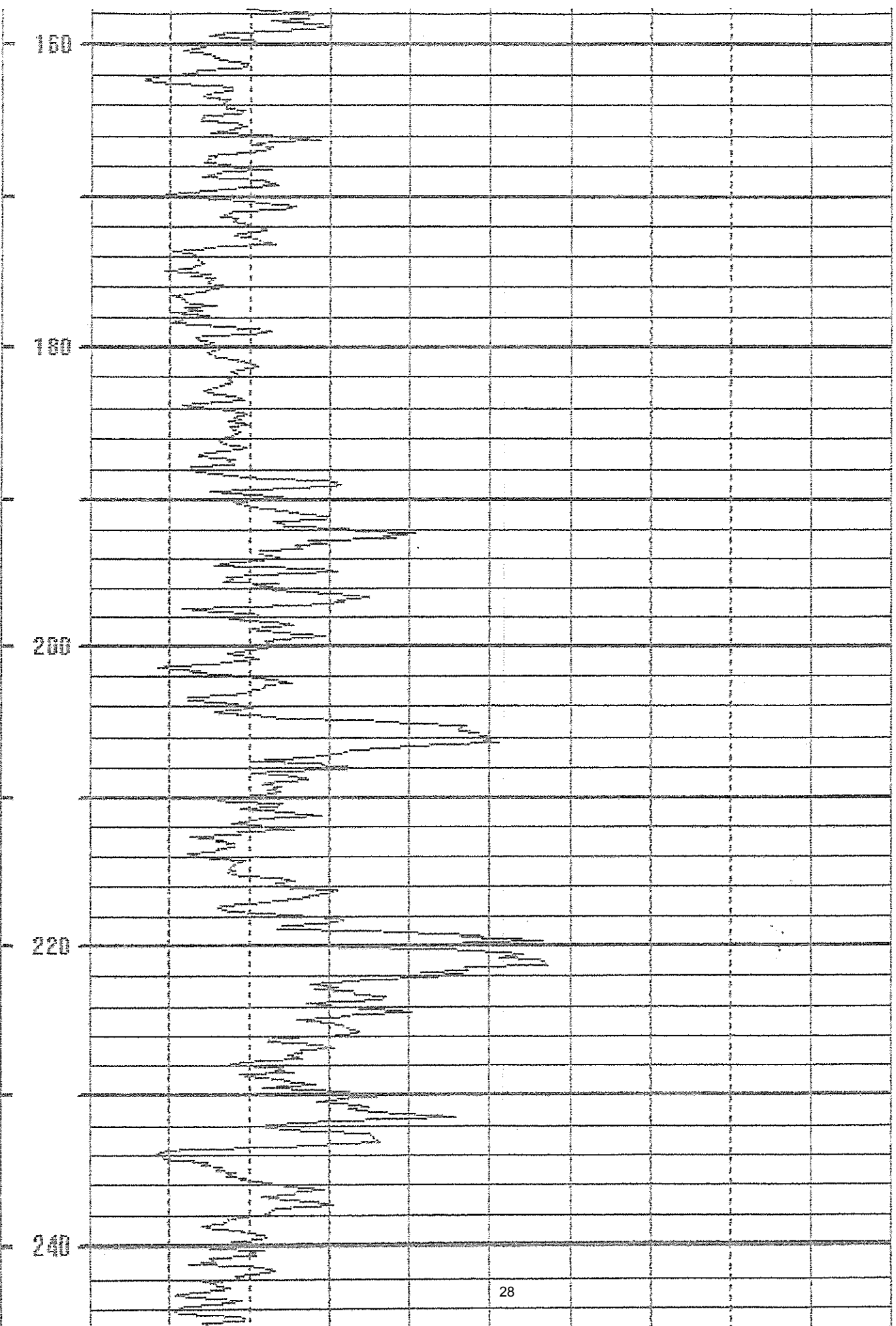
Converted to Well: Yes  No  Well I.D. #: VPB-132

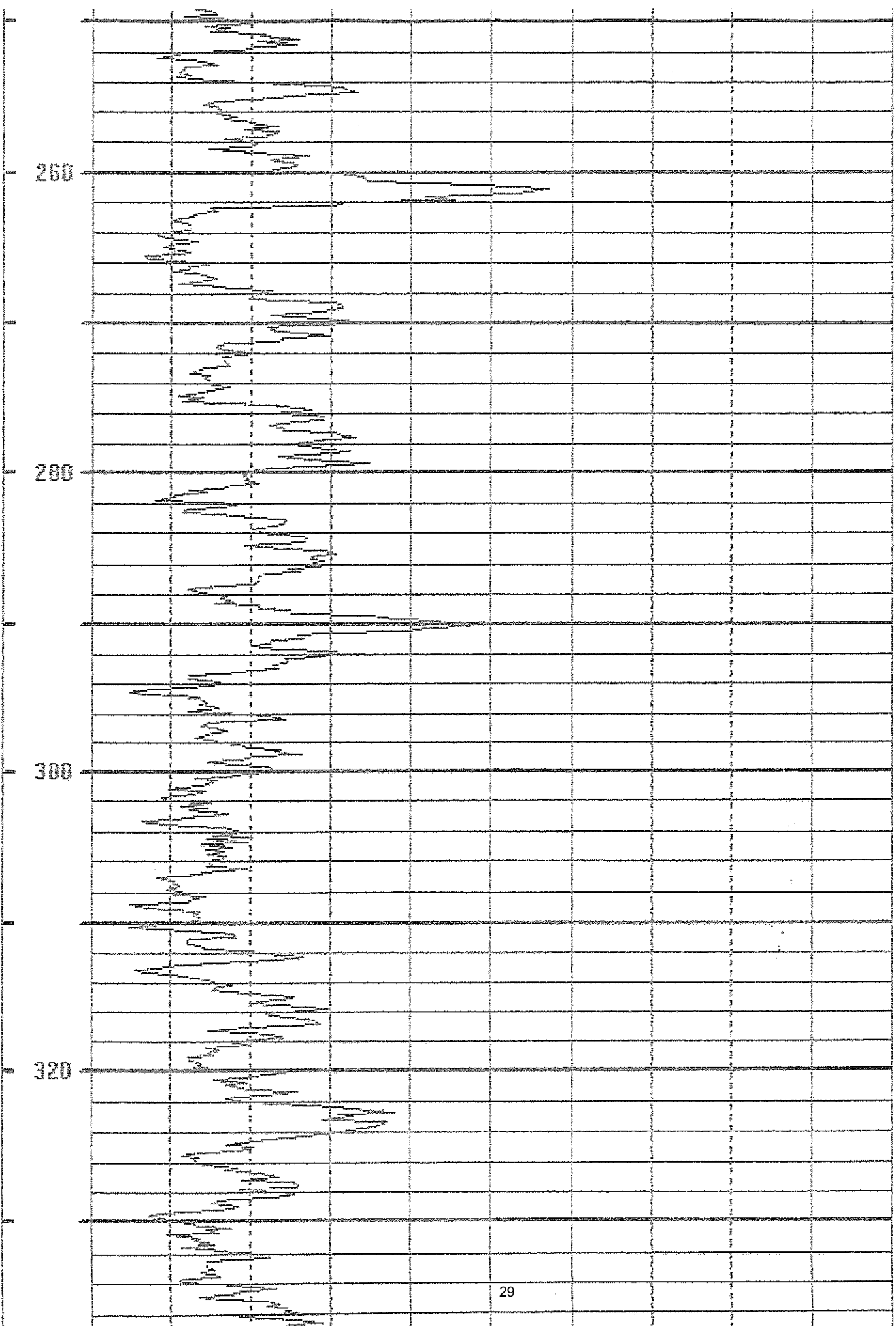
COMPANY: DELTA WELL & PUMP CO., INC.		Casing
LOG: 717 NWFP KILDARE CRESCENT		
Well	VP-132	Depth Driller Depth Logger
Date	02/23/12	BH Fluid VPB-132 Logged by: CMO
File Name	717 DOWN	Witness: STAN

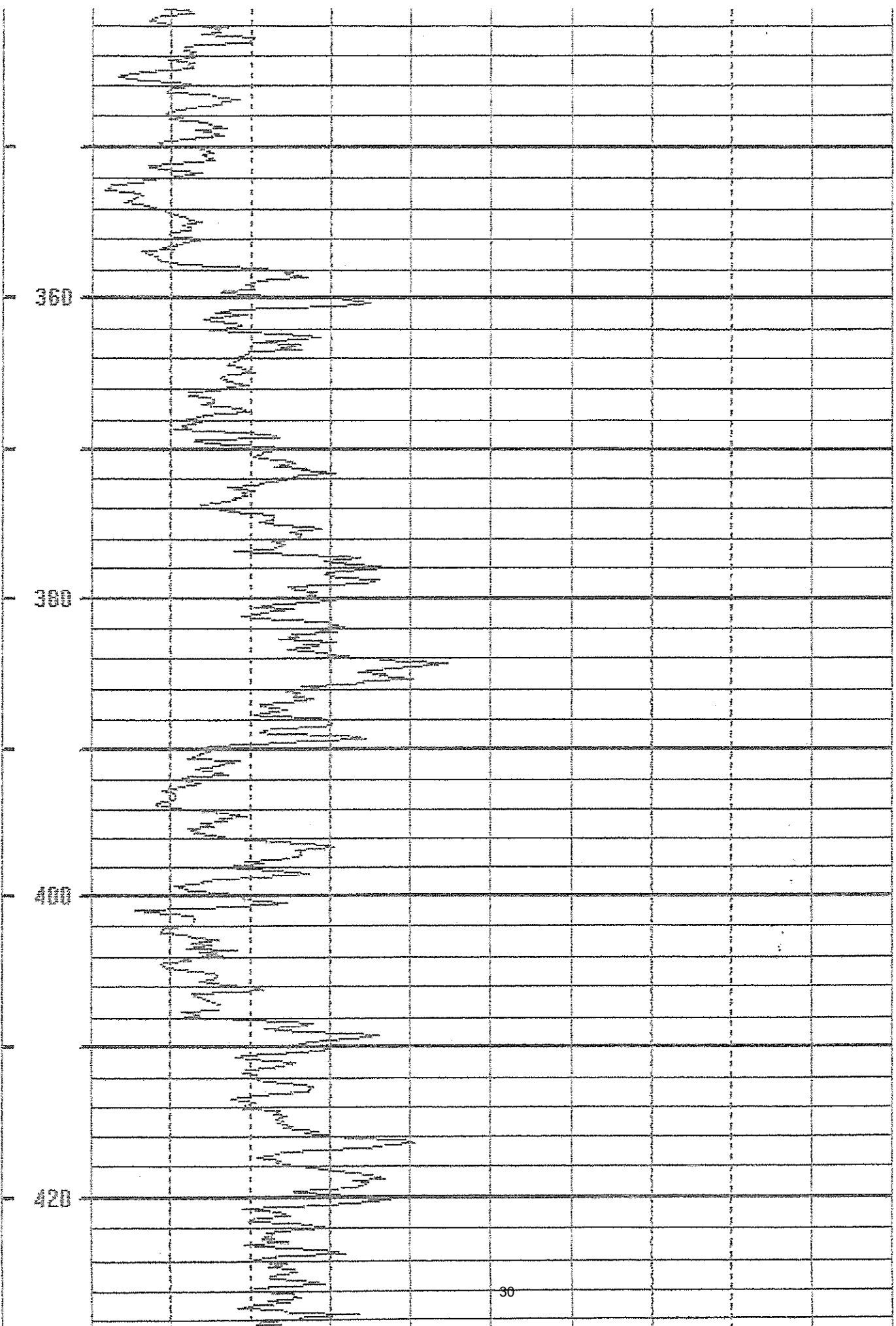


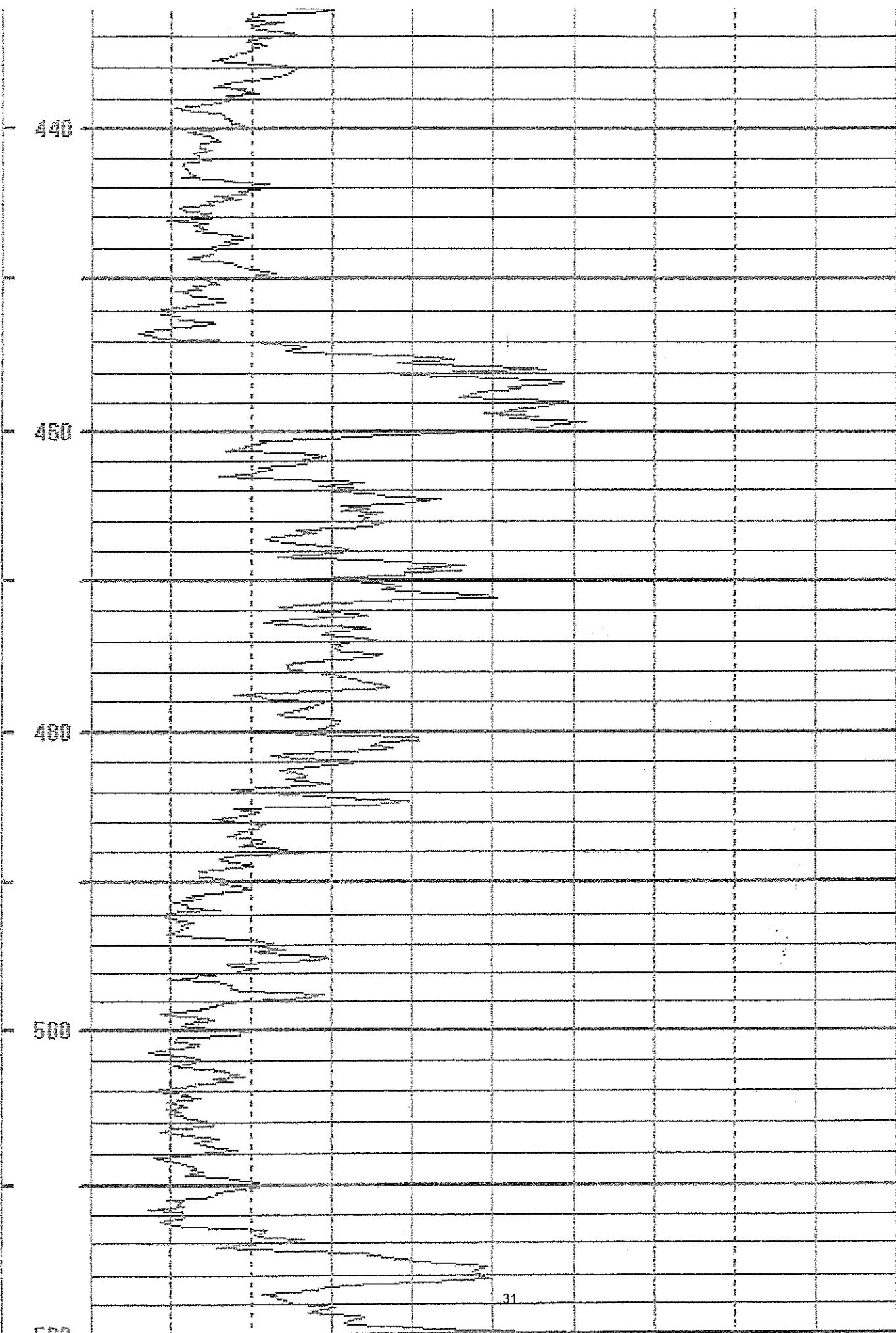










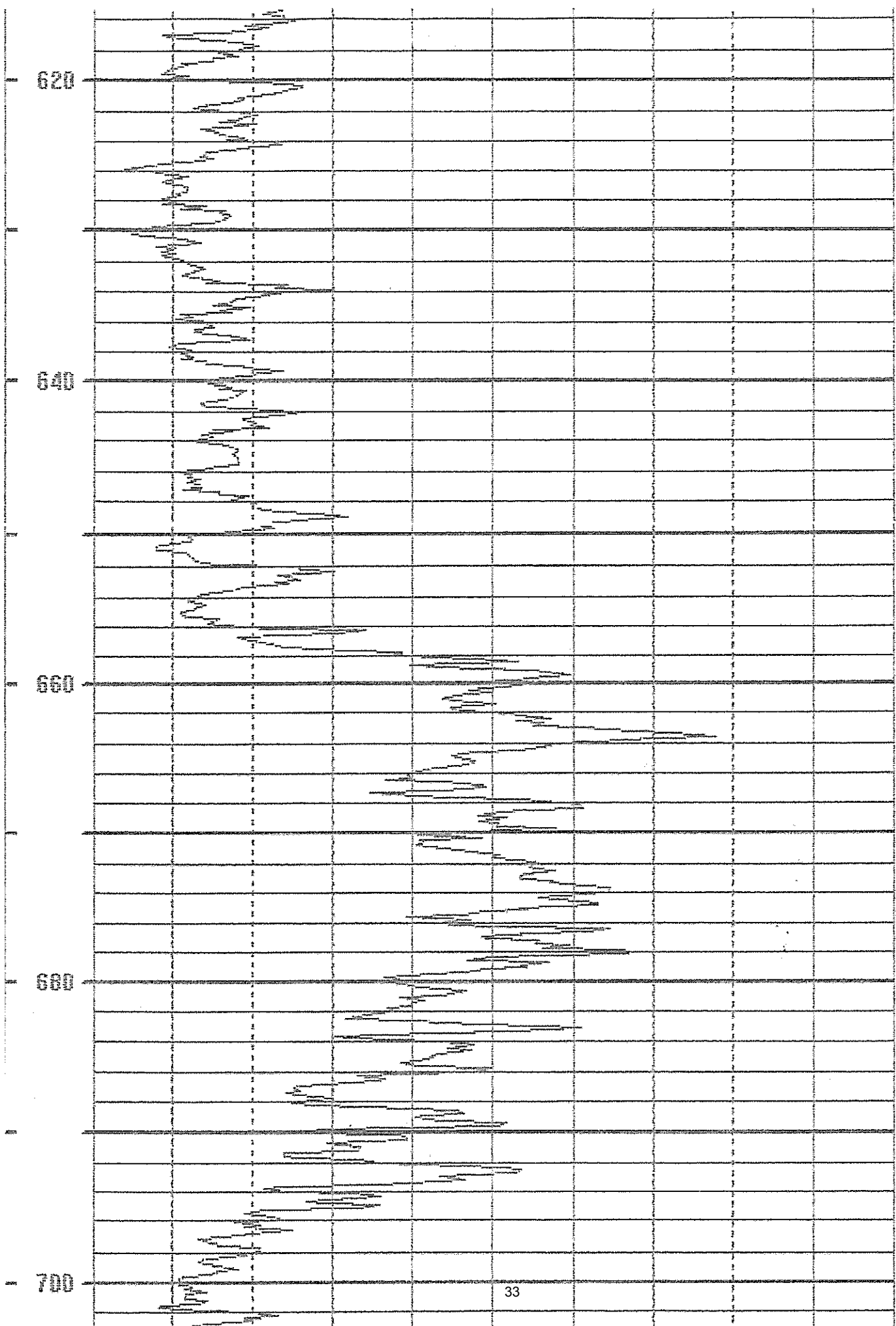


540

550

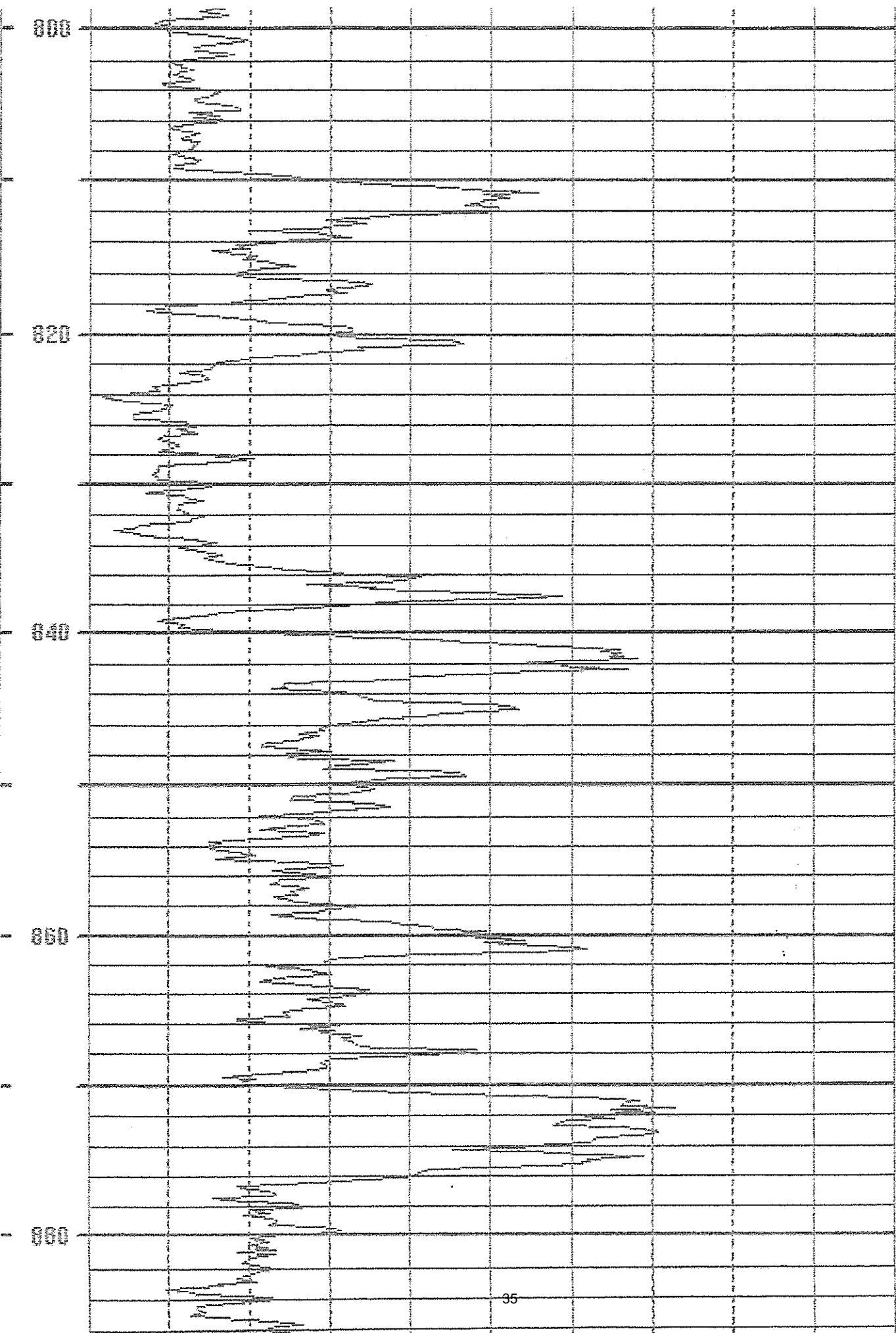
560

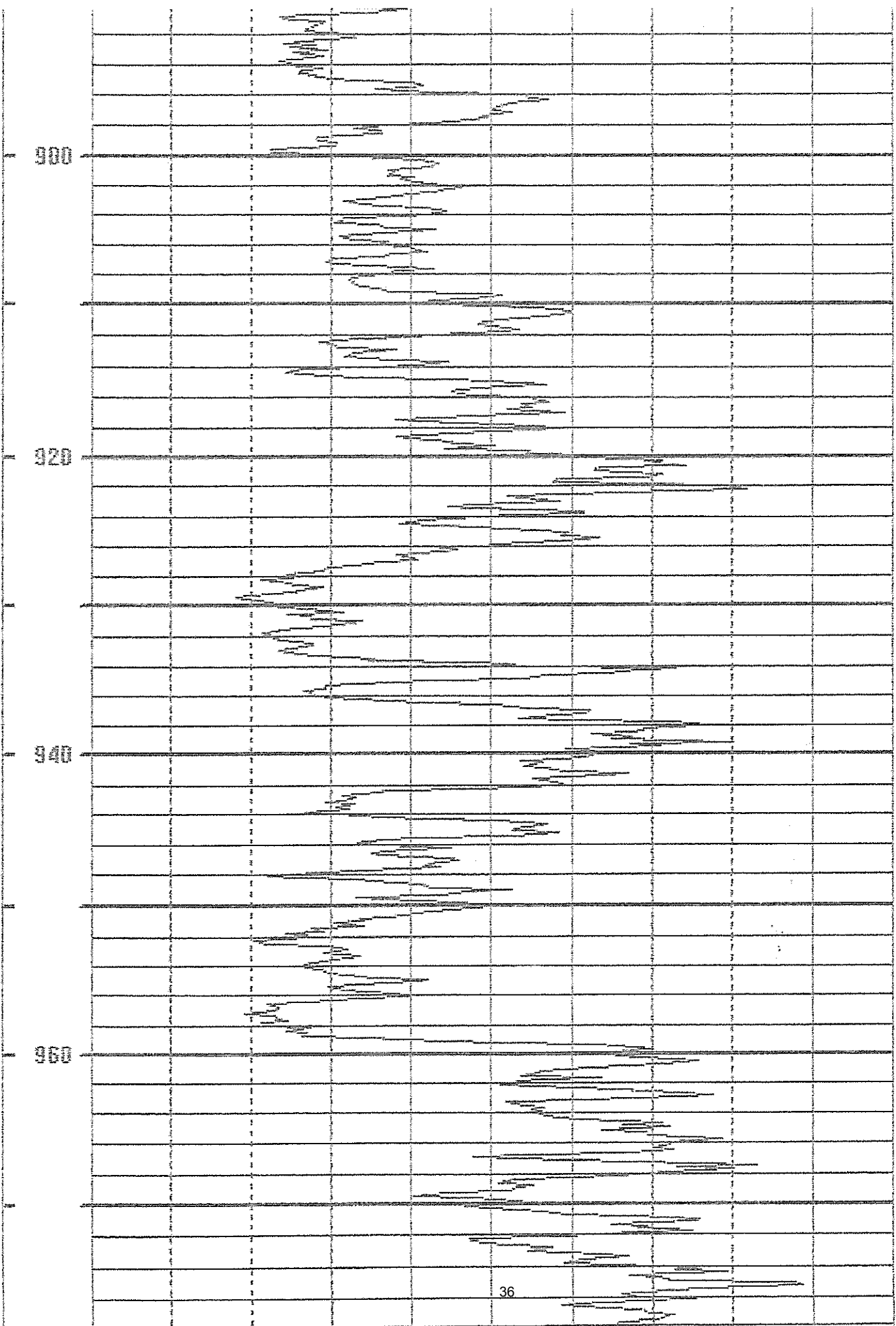
570







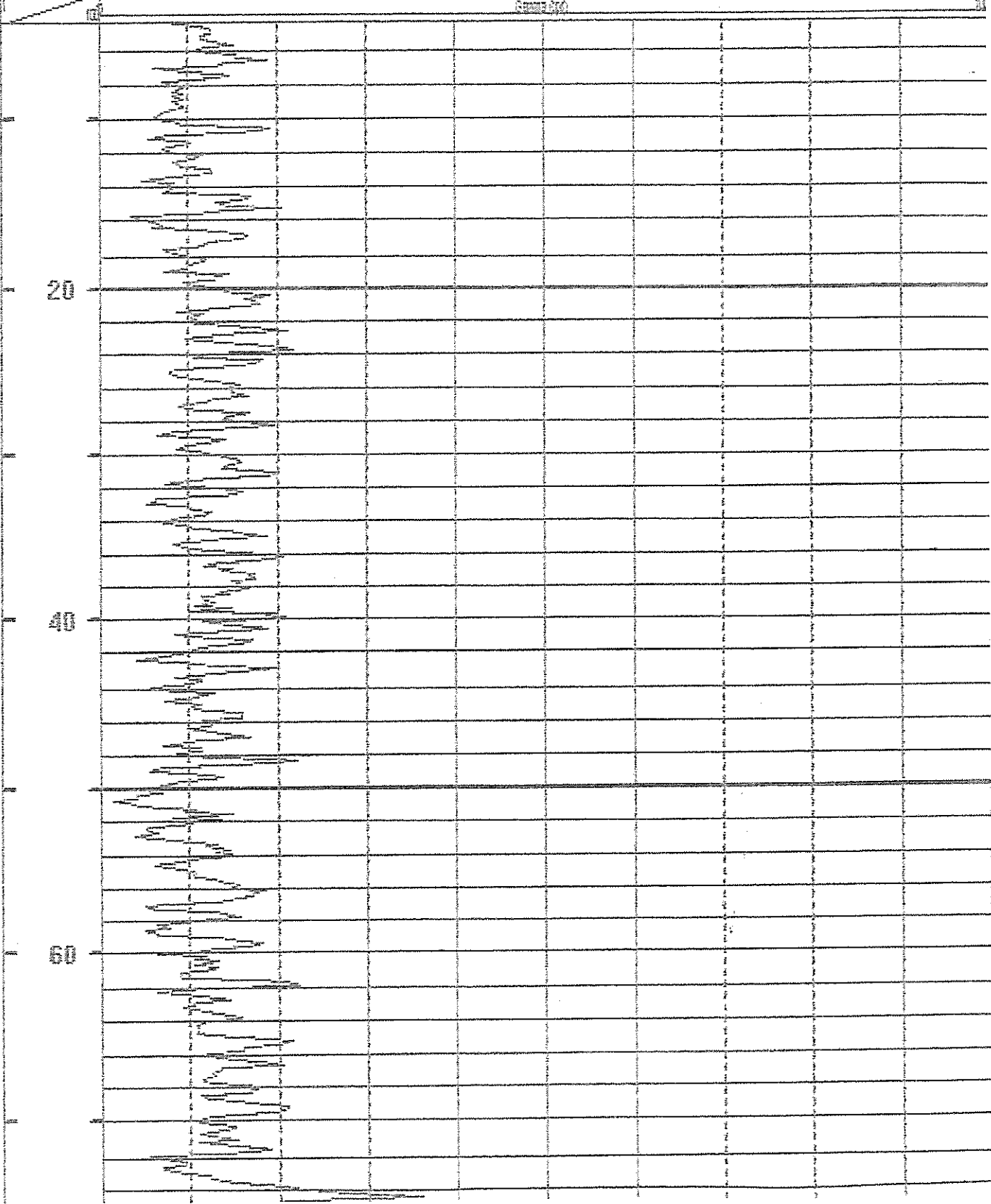


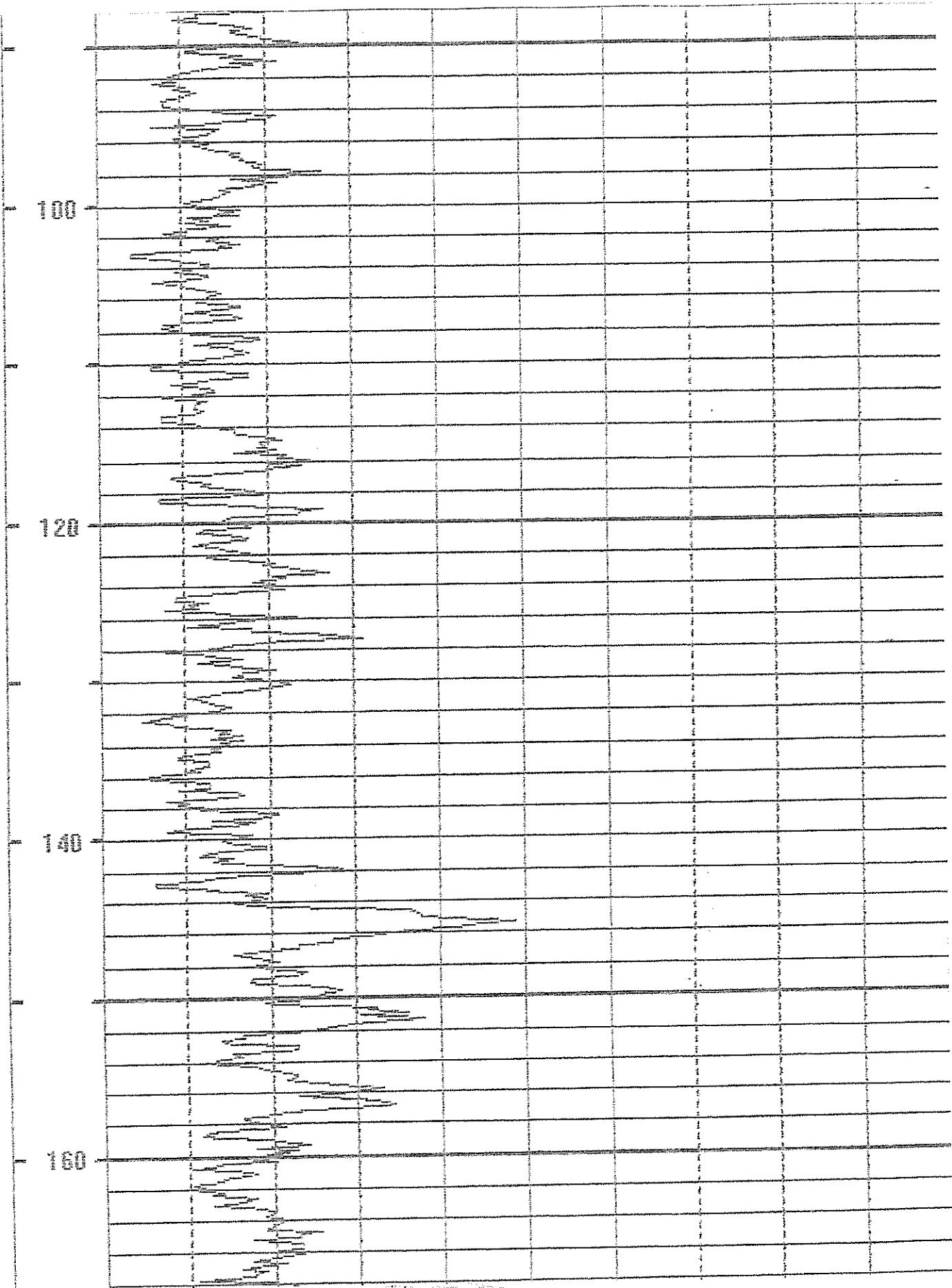


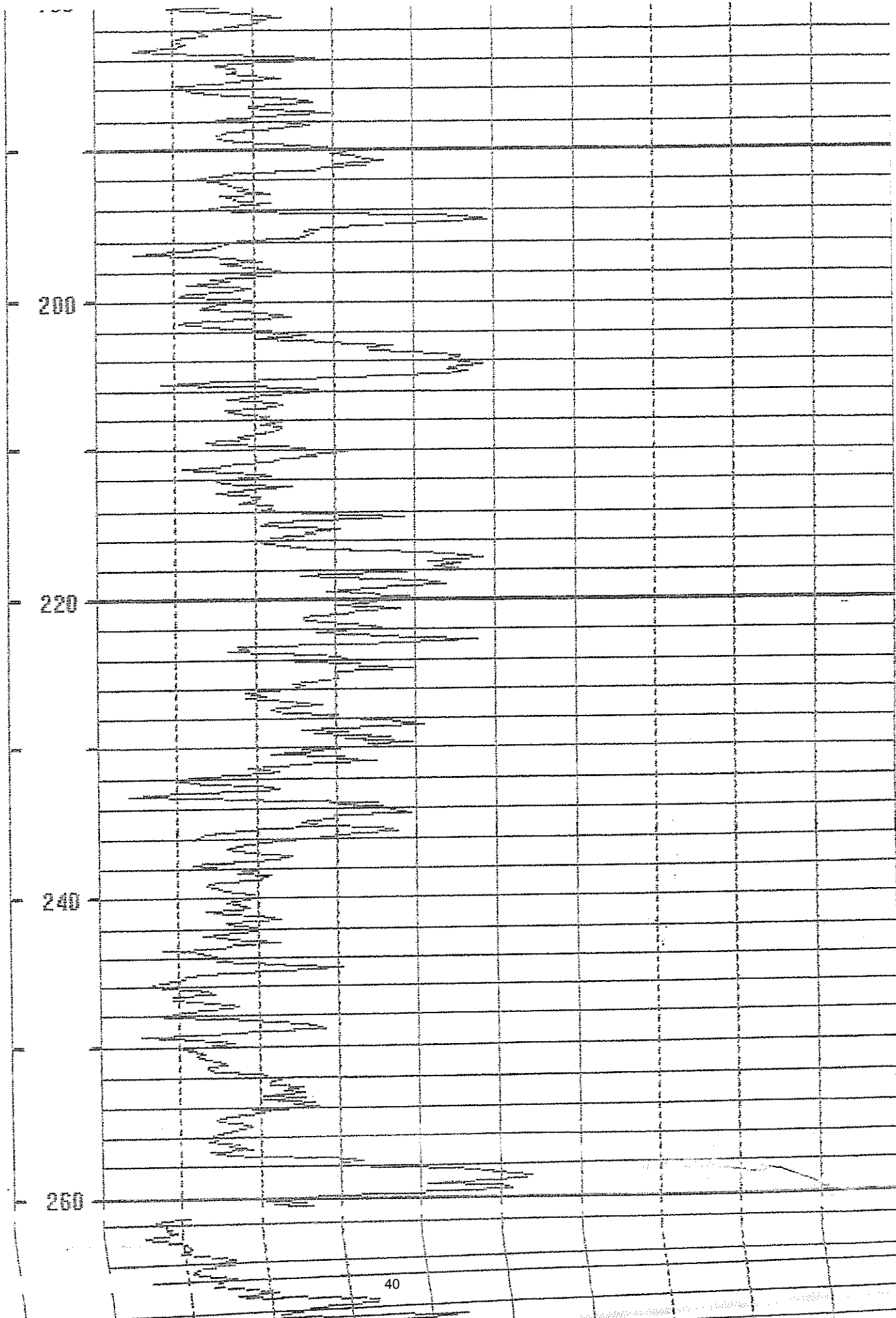


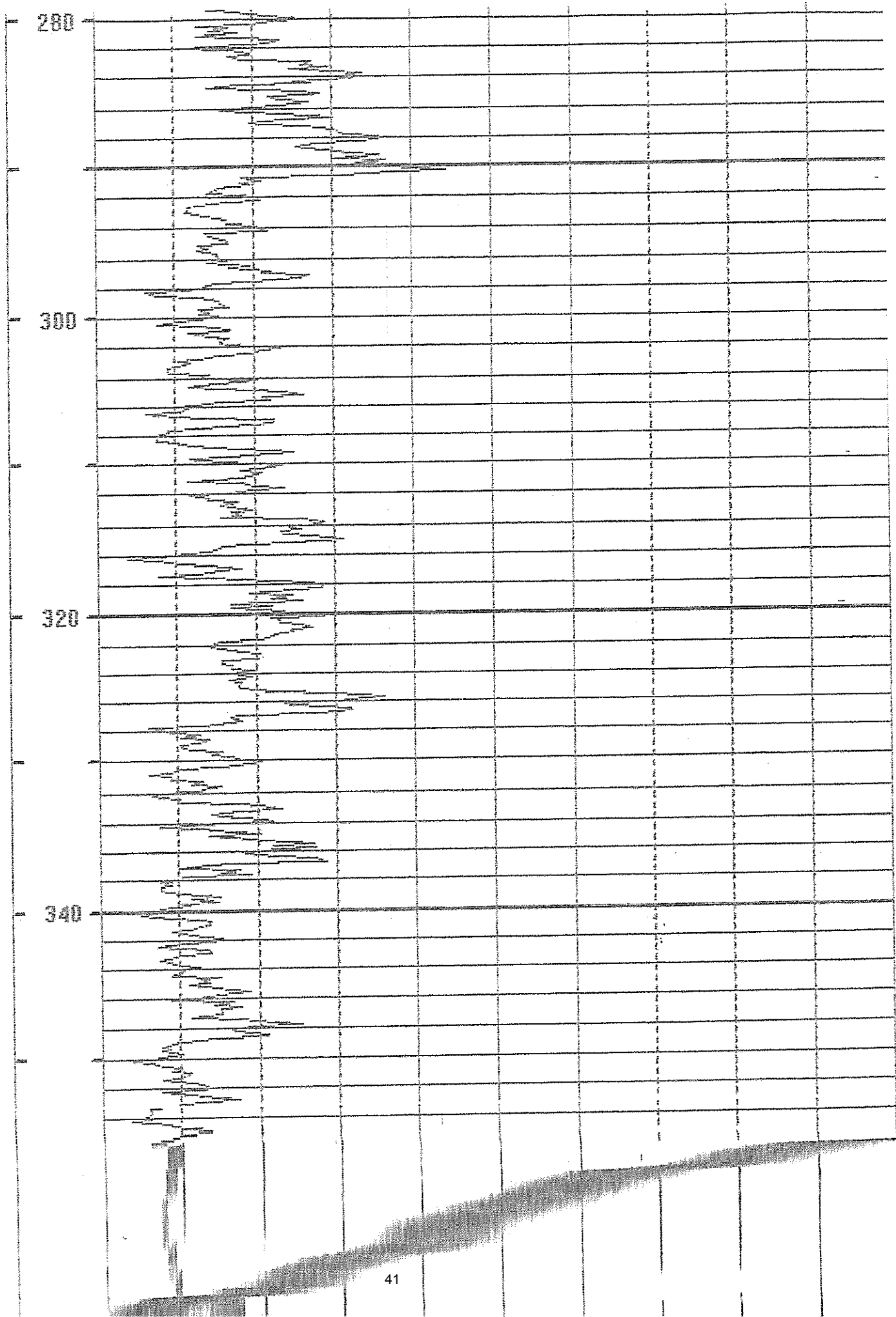
Date 02/23/12 BH Fluid Logged by: CMO

File Name 717 VPB-132 UP Witness: STAR







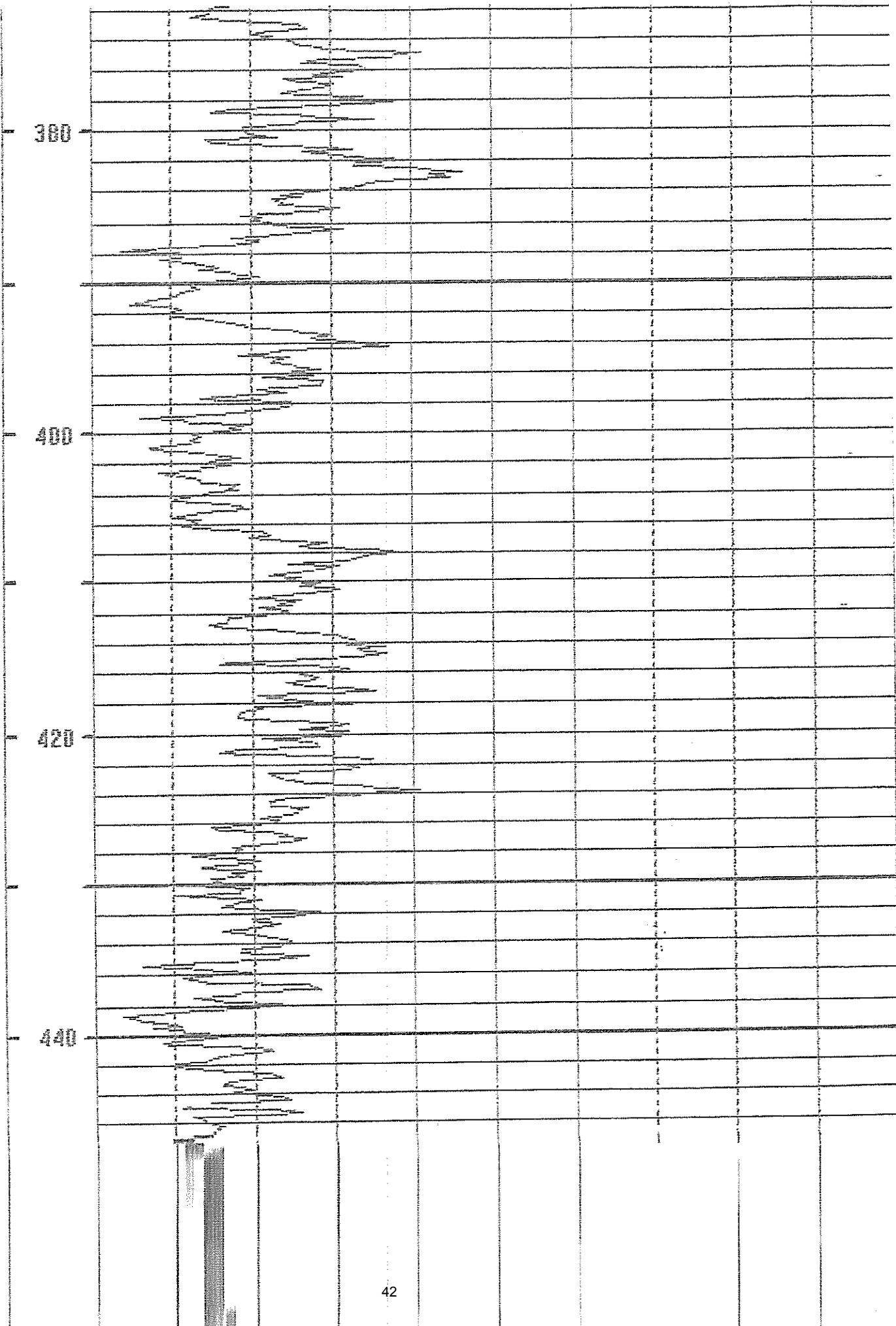


280

300

320

340



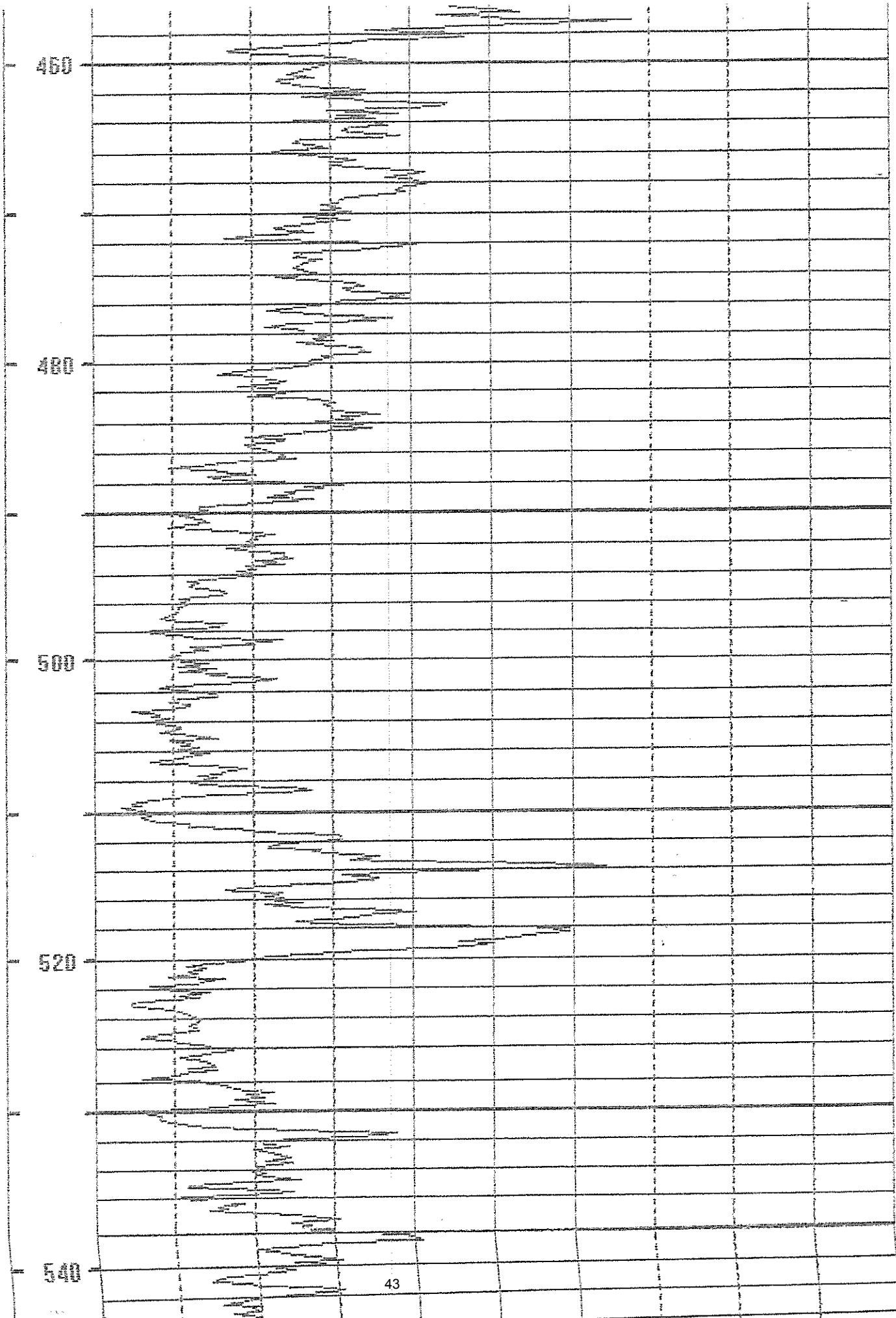
300

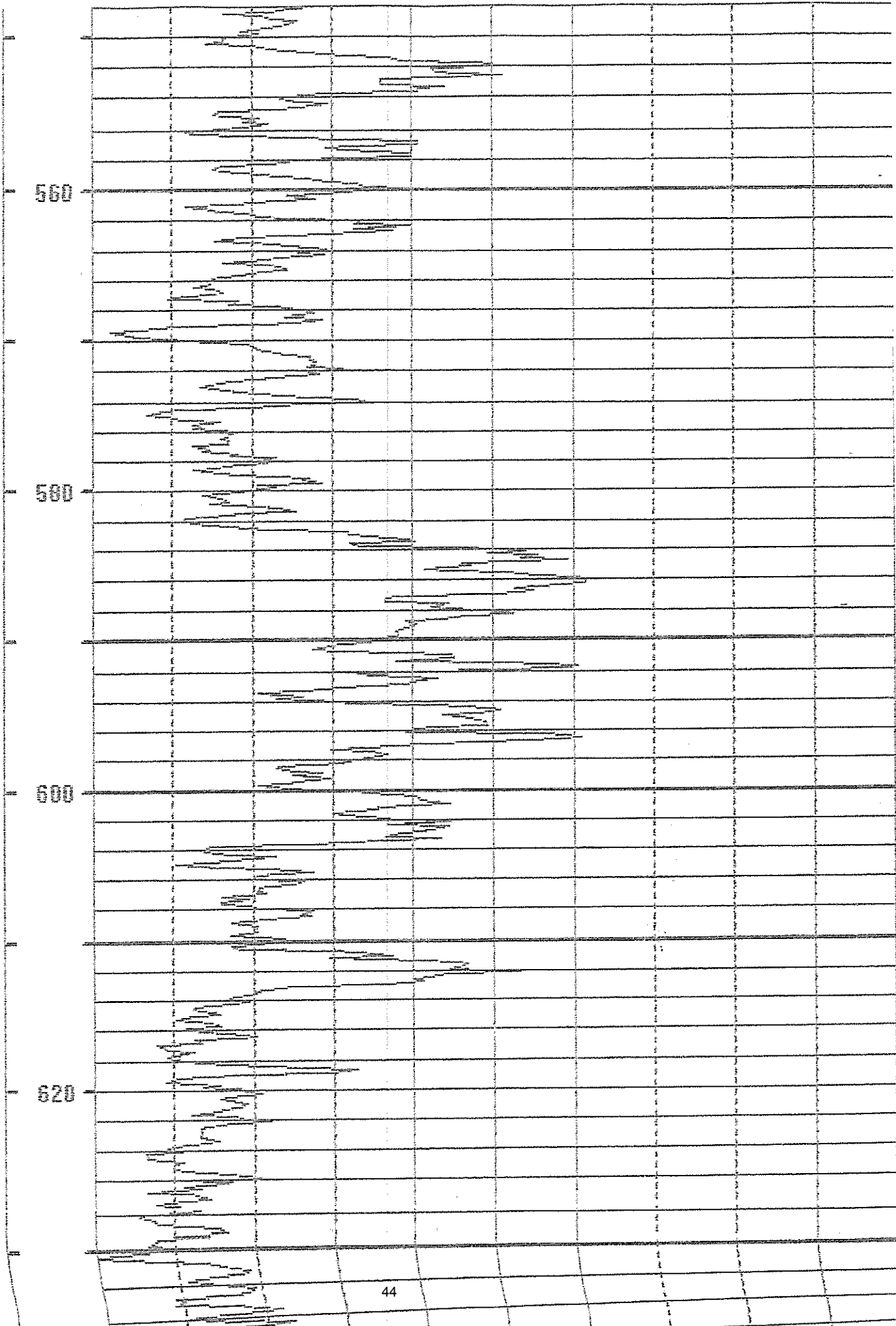
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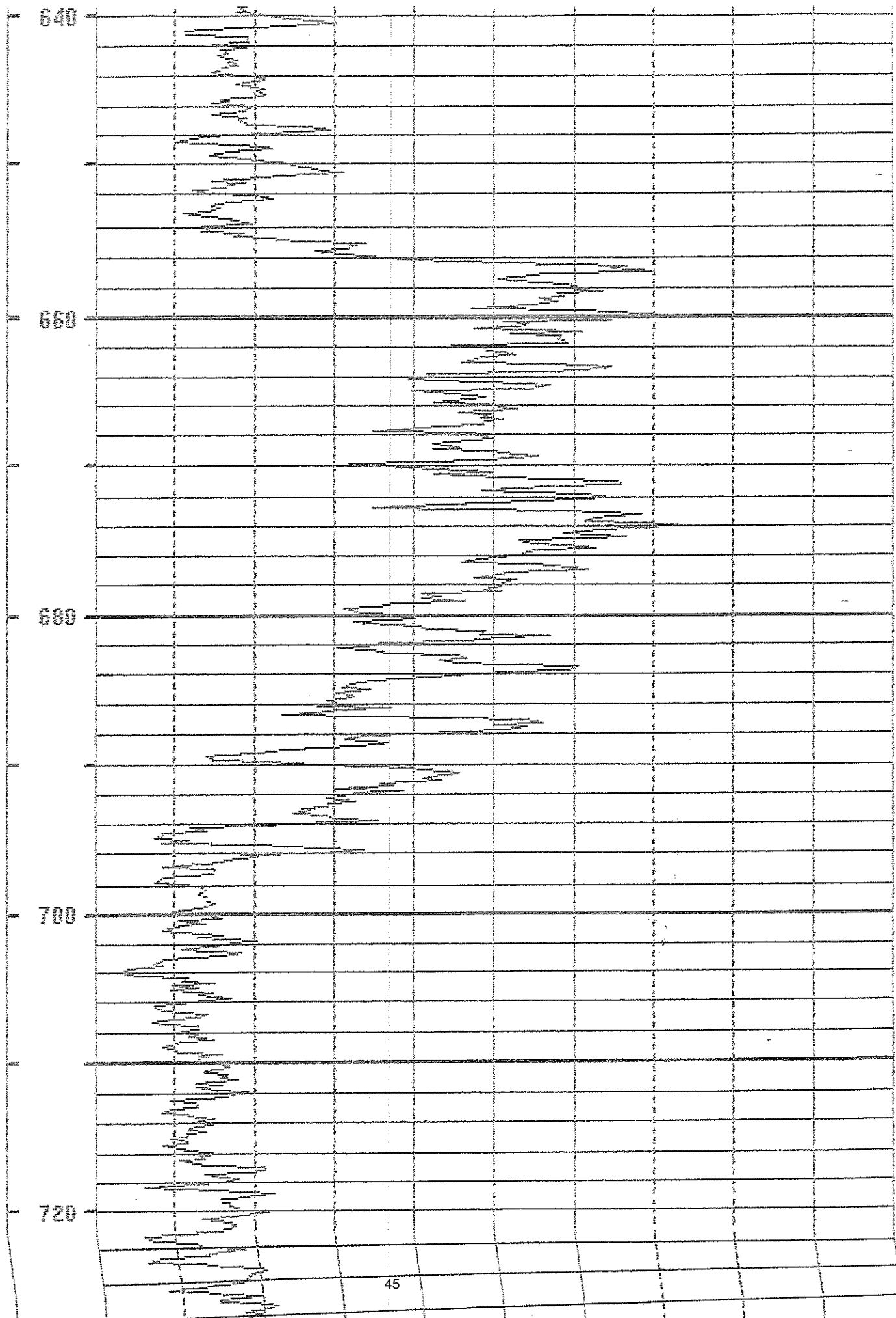
500

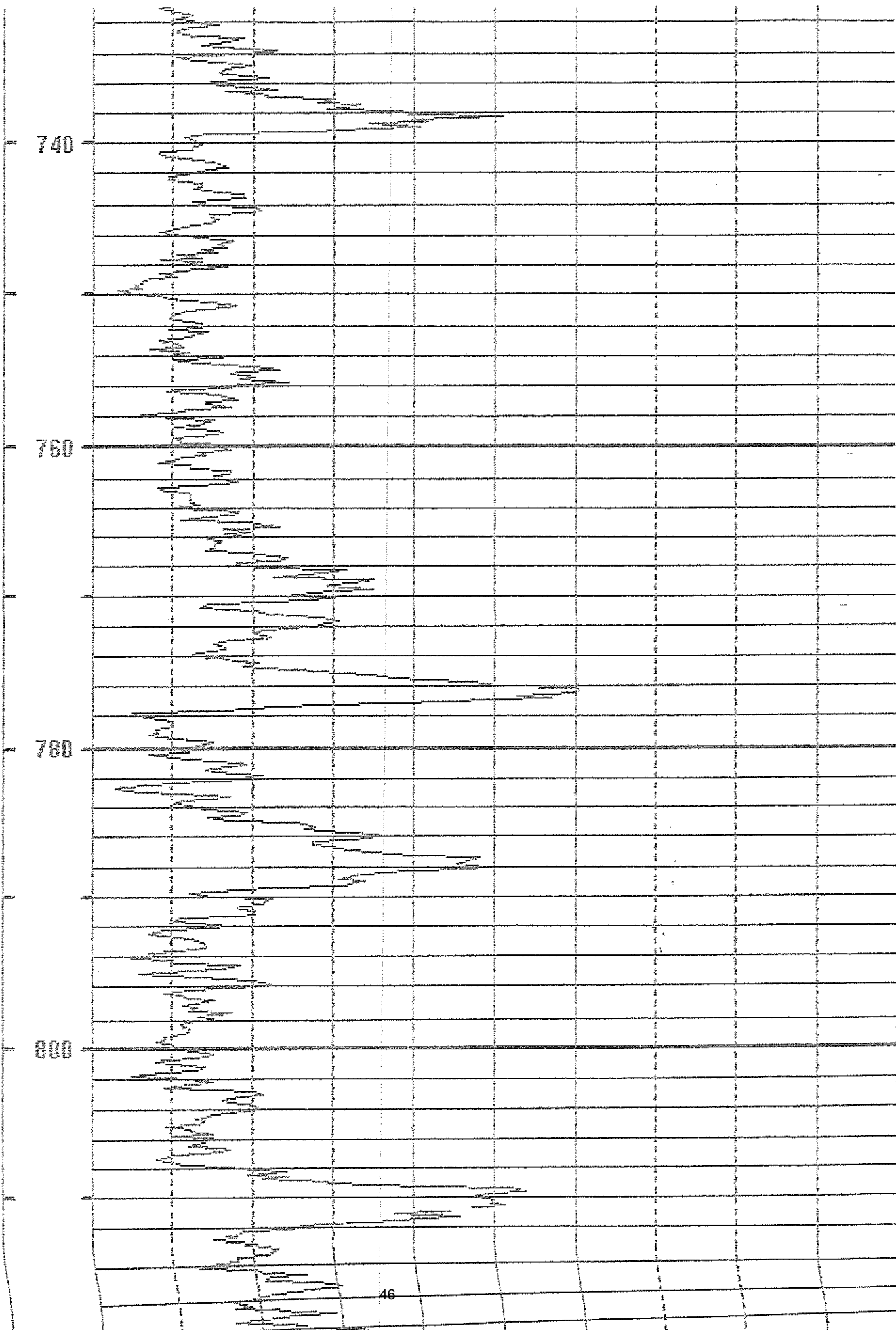
600

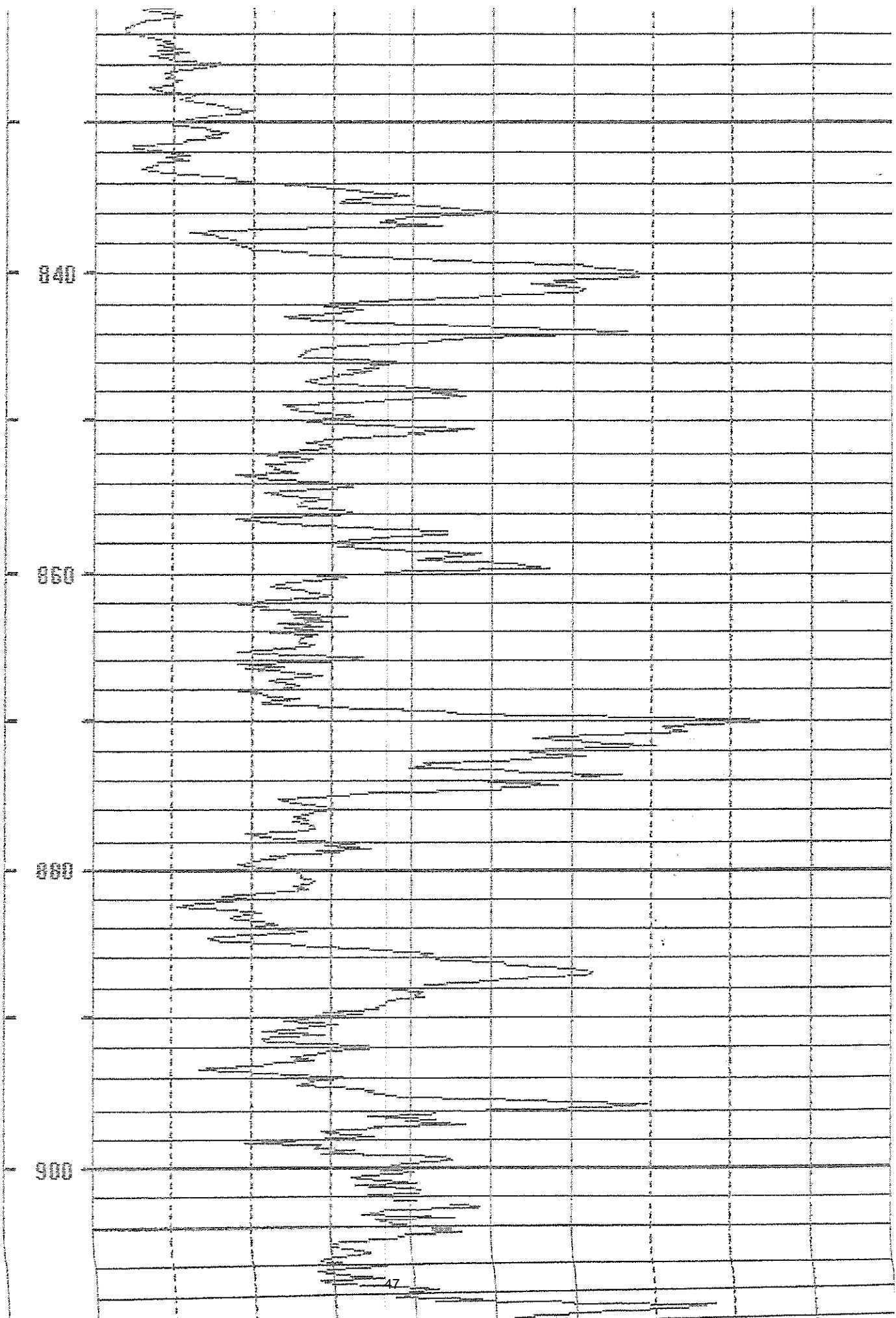












840

860

880

900



**Section 3**

**VPB 132 Groundwater Sample Log Sheets**



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-C61**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 028405  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
1 / 24 / 12	LT BRN	5.13	362	13.26	348	8.30	18	—

### PURGE DATA:

Date:	NA							
Method:	NA							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2-40ml Glass Vials	✓
TOC	4 DEG C	4 or 8 oz. Glass Jar	

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

### Circle if Applicable:

MS/MSD	Duplicate ID No.:
--------	-------------------

### Signature(s):

*SJ Conte*





Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-121**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 028405  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>1/24/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1330</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<u>BRN</u>	—	—	—	<u>&gt;1000</u>	—	—	—

### PURGE DATA:

Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	<u>2-40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<i>SJC</i>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW- 181**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 028405  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA: TDS

Date:	<u>1 / 24 / 12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1030</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>LT BRN</u>	<u>5.83</u>	<u>426</u>	<u>10.92</u>	<u>690</u>	<u>13.16</u>	<u>16</u>	<u>277</u>

### PURGE DATA: 9/L

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>2-40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	<input type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MVV = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s): 
MS/MSD	Duplicate ID No.:	



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW- 221**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: **028405**  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA: TDS

Date:	<u>1/25/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1350</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>LT GRAY</u>	<u>5.92</u>	<u>266</u>	<u>12.27</u>	<u>207</u>	<u>11.56</u>	<u>-6</u>	<u>173</u>

### PURGE DATA: g/L

Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2- 40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 of 8 oz. Glass Jar	<input type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s): <i>Sj Contri</i>
MS/MSD	Duplicate ID No.:	



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW- 241**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 028405  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>1/25/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1600</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<u>RPN</u>	<u>5-6</u>	—	—	<u>&gt;1000</u>	—	—	—

### PURGE DATA:

Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	<u>2-40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-261**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

- Domestic Well Data
- Monitoring Well Data
- Other Well Type:
- QA Sample Type:

Vertical Profile Boring

C.O.C. No.: **028405**  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	TDS
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	Other
1/26/12	CLEAR	5.64	264	12.38	58	11.16	34	172

### PURGE DATA:

Date:	NA							
Method:	NA							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2-40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

### Circle if Applicable:

MS/MSD	Duplicate ID No.:
--------	-------------------

### Signature(s):

*S. J. Conti*



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW- 281**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 028405  
 Type of Sample:  
 Low Concentration  
 High Concentration

SAMPLING DATA:									
Date:	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other	
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA	
1/26/12	GRAY	5.96	—	—	>1000	—	—	—	
Method:	Hydropunch								

PURGE DATA:									
Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2-40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

SCREEN EXPOSED 12"  
 NO SIGN OF CLAY  
 ON SCREEN. GOOD  
 SAMPLE, BUT NOT  
 ENOUGH FOR PARAMETERS

Circle if Applicable:		Signature(s):  <i>SJC Conter</i>
MS/MSD	Duplicate ID No.:	





Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**      Sample ID No.: **BP-VPB132-GW-321**  
 Project No.: **112G00622**      Sample Location: **VPB-132**  
**PRE-DESIGN FIELD INVES**      Sampled By: **SJC**

Domestic Well Data      C.O.C. No.: **1108**  
 Monitoring Well Data      Type of Sample:  
 Other Well Type: **Vertical Profile Boring**       Low Concentration  
 QA Sample Type: \_\_\_\_\_       High Concentration

SAMPLING DATA:									TDS
Date:	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other	
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA	
1/30/12	LT GRAY	5.86	296	11.26	111	10.85	48	192	

PURGE DATA:									91L
Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2- 40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s):  <i>SJ Centi</i>
MS/MSD	Duplicate ID No.:	





Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**      Sample ID No.: BP-VPB132-GW-341  
 Project No.: **112G00622**      Sample Location: VPB-132  
**PRE-DESIGN FIELD INVES**      Sampled By: SJC

Domestic Well Data      C.O.C. No.: 1108  
 Monitoring Well Data      Type of Sample:  
 Other Well Type: Vertical Profile Boring       Low Concentration  
 QA Sample Type: \_\_\_\_\_       High Concentration

SAMPLING DATA:									TDS
Date:	<u>1/31/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1050</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>LTGRAY</u>	<u>5.77</u>	<u>263</u>	<u>11.78</u>	<u>155</u>	<u>9.60</u>	<u>49</u>	<u>171</u>

PURGE DATA:									
Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2- 40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<u>SJC Conte</u>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-361**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: **1108**  
 Type of Sample:  
 Low Concentration  
 High Concentration

SAMPLING DATA:									TDS
Date:	<b>1/31/12</b>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<b>1315</b>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<b>GRAY</b>	<b>5.45</b>	<b>284</b>	<b>14.78</b>	<b>&gt;1000</b>	<b>3.27</b>	<b>32</b>	<b>.185</b>

PURGE DATA:									
Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2-40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft  
 Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.  
 Not enough volume for water quality parameters   
 Check box if not enough volume.  
 Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<i>SJC Conti</i>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name:	<b>BETHPAGE OU-2 OFFSITE GW</b>	Sample ID No.:	<b>BP-VPB132-GW-381</b>
Project No.:	<b>112G00622</b>	Sample Location:	<b>VPB-132</b>
	<b>PRE-DESIGN FIELD INVES</b>	Sampled By:	<b>SJC</b>
<input type="checkbox"/> Domestic Well Data <input type="checkbox"/> Monitoring Well Data <input checked="" type="checkbox"/> Other Well Type: <u>Vertical Profile Boring</u> <input type="checkbox"/> QA Sample Type: _____		C.O.C. No.: <u>1108</u> Type of Sample: <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration	

SAMPLING DATA:									TDS
Date:	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other	
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA	
1/31/12	LT GRAY	5.44	270	14.01	98	NA	63	176	

PURGE DATA:									TDS
Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2-10ml Glass Vials	✓
TOC	4 DEG C	4 or 8 oz. Glass Jar	

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<i>SJ Conti</i>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**      Sample ID No.: BP-VPB132-GW- 401  
 Project No.: **112G00622**      Sample Location: VPB-132  
**PRE-DESIGN FIELD INVES**      Sampled By: SJC

Domestic Well Data      C.O.C. No.: 1108  
 Monitoring Well Data      Type of Sample:  
 Other Well Type: Vertical Profile Boring       Low Concentration  
 QA Sample Type: \_\_\_\_\_       High Concentration

SAMPLING DATA:									TDS
Date:	<u>2/1/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1000</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>LT. GRAY</u>	<u>5.48</u>	<u>293</u>	<u>14.27</u>	<u>96</u>	<u>NA</u>	<u>21</u>	<u>.190</u>

PURGE DATA:									g/L
Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>2- 40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	<input type="checkbox"/>

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft  
 Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**      Sample ID No.: **BP-VPB132-GW- 421**  
 Project No.: **112G00622**      Sample Location: **VPB-132**  
**PRE-DESIGN FIELD INVES**      Sampled By: **SJC**

Domestic Well Data      C.O.C. No.: **1108**  
 Monitoring Well Data      Type of Sample:  
 Other Well Type: **Vertical Profile Boring**       Low Concentration  
 QA Sample Type: \_\_\_\_\_       High Concentration

SAMPLING DATA:									TDS
Date:	<b>2 / 1 / 12</b>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<b>1230</b>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<b>CLEAR</b>	<b>5.52</b>	<b>206</b>	<b>16.33</b>	<b>72</b>	<b>6.80</b>	<b>103</b>	<b>134</b>
PURGE DATA: <b>TO LTGRAY</b>									<b>9/L</b>

Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	<u>2-40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<i>SJ Conter</i>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: BETHPAGE OU-2 OFFSITE GW  
 Project No.: 112G00622  
PRE-DESIGN FIELD INVES

Sample ID No.: BP-VPB132-GW-441  
 Sample Location: VPB-132  
 Sampled By: SJC

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1108  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA: TDS

Date:	<u>2/1/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1415</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>CLEAR</u>	<u>5.70</u>	<u>185</u>	<u>17.08</u>	<u>92</u>	<u>6.10</u>	<u>71</u>	<u>120</u>

### PURGE DATA: 3/L

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>2 40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	<input type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s):  <u>SJC</u>
MS/MSD	Duplicate ID No.:	



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-461**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1108  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2/2/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>0940</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<b>GRAY</b>	<b>5-6</b>	—	—	<b>&gt;1000</b>	—	—	—

### PURGE DATA:

Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	<u>2-40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

**TRACE CLAY ON H.P. SCREEN.**

Circle if Applicable: MS/MSD Duplicate ID No.: \_\_\_\_\_ Signature(s): SJC Conte



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-481**  
Sample Location: **VPB-132**  
Sampled By: **SJC**

- Domestic Well Data
- Monitoring Well Data
- Other Well Type: Vertical Profile Boring
- QA Sample Type: \_\_\_\_\_

C.O.C. No.: **1108**  
Type of Sample:  
 Low Concentration  
 High Concentration

**SAMPLING DATA:**

Date:	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	TDS
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	Other
2 / 2 / 12	LT GRAY	5.83	105	14.51	118	12.83	76	0.068

PURGE DATA: **FLORIBA = 4.30 LAMOTTE 8 L**

Date:	NA							
Method:	NA							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

**SAMPLE COLLECTION INFORMATION: Strike thru analysis not required**

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2- 40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

**OBSERVATIONS / NOTES:**

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
Check box if not enough volume.

Used pH paper instead of water quality meter   
Check box if used pH paper.

Circle if Applicable: MS/MSD Duplicate ID No.: \_\_\_\_\_ Signature(s): *SJC*





Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-501**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

- Domestic Well Data
- Monitoring Well Data
- Other Well Type: Vertical Profile Boring
- QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1108  
 Type of Sample:  
 Low Concentration  
 High Concentration

**SAMPLING DATA:**

Date:	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	TDS
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	Other
2/2/12	LT GRAY	5.90	-0.72	11.54	92	9.44	74	047

**PURGE DATA:**

Date:	NA							
Method:	NA							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

**SAMPLE COLLECTION INFORMATION: Strike thru analysis not required**

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2-40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

**OBSERVATIONS / NOTES:**

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

**Circle if Applicable:**

MS/MSD	Duplicate ID No.:
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**Signature(s):**

*SJC Conti*



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-521**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1109  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2/3/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1120</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<u>LTGRAY</u>	<u>5.36</u>	—	—	—	—	—	—

### PURGE DATA:

Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	<u>2-40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

### Circle if Applicable:

MS/MSD	Duplicate ID No.:
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### Signature(s):

*SJC*



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-541**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1109  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA: TDS

Date:	2/6/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	1210	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	LT GRAY	6.00	108	11.78	890	7.28	-11	070

### PURGE DATA: (LaMotte) 91L

Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2-40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<i>SJC</i>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**      Sample ID No.: BP-VPB132-GW-561  
 Project No.: **112G00622**      Sample Location: VPB-132  
**PRE-DESIGN FIELD INVES**      Sampled By: SJC

Domestic Well Data      C.O.C. No.: 1109  
 Monitoring Well Data      Type of Sample:  
 Other Well Type: Vertical Profile Boring       Low Concentration  
 QA Sample Type: \_\_\_\_\_       High Concentration

SAMPLING DATA:									
Date:	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other	
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA	
<u>2/6/12</u>	<u>GRAY</u>	<u>5-6</u>	<u>—</u>	<u>—</u>	<u>&gt;1000</u>	<u>—</u>	<u>—</u>	<u>—</u>	
Method:	<u>Hydropunch</u>								

PURGE DATA:									
Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>1 x 40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  Check box if not enough volume.

Used pH paper instead of water quality meter  Check box if used pH paper.

**ONLY 1 VIAL COLLECTED SANDY CLAY ON H.P. SCREEN, WHICH WAS OPEN ~ 12" EXPOSED.**

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<u>SJC</u>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-581**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1109  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA: TDS

Date:	<u>2/7/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1000</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>GRAY</u>	<u>5.93</u>	<u>.085</u>	<u>13.93</u>	<u>&gt;1000</u>	<u>8.24</u>	<u>3</u>	<u>055</u>

### PURGE DATA: g/L

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	<input checked="" type="checkbox"/> 2- 40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	<input checked="" type="checkbox"/> 4 or 8 oz. Glass Jar	<input checked="" type="checkbox"/>
VOCs	4°C	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

### Circle if Applicable: Signature(s):

MS/MSD	Duplicate ID No.:	
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Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name:	<b>BETHPAGE OU-2 OFFSITE GW</b>	Sample ID No.:	<b>BP-VPB132-GW-601</b>
Project No.:	<b>112G00622</b>	Sample Location:	<b>VPB-132</b>
	<b>PRE-DESIGN FIELD INVES</b>	Sampled By:	<b>SJC</b>
<input type="checkbox"/> Domestic Well Data <input type="checkbox"/> Monitoring Well Data <input checked="" type="checkbox"/> Other Well Type: <u>Vertical Profile Boring</u> <input type="checkbox"/> QA Sample Type: _____		C.O.C. No.: <u>1109</u> Type of Sample: <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration	

SAMPLING DATA:									TDS
Date:	<u>2/7/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1215</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>LTGRAY</u>	<u>5.93</u>	<u>0.055</u>	<u>15.37</u>	<u>125</u>	<u>10.54</u>	<u>76</u>	<u>036</u>

PURGE DATA:									S/L
Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	<input checked="" type="checkbox"/> 40ml Glass Vials	✓
TOC	4 DEG C	4 or 8 oz. Glass Jar	
VOC <sup>s</sup>	4°C	<input checked="" type="checkbox"/> 40ml	✓

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable:		Signature(s):  <i>SJ Conte</i>
MS/MSD	Duplicate ID No.:	



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: BETHPAGE OU-2 OFFSITE GW  
 Project No.: 112G00622  
PRE-DESIGN FIELD INVES

Sample ID No.: BP-VPB132-GW- 621  
 Sample Location: VPB-132  
 Sampled By: SJC

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: NA  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2 / 7 / 12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1500</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>GRAY</u>	—	—	—	—	—	—	—

### PURGE DATA:

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>2- 40ml Glass Vials</u>	
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

*SANDY*  
 NO SAMPLE - CLAY  
 ON SCREEN - EXPOSED  
 SCREEN ONLY 5" DUE  
 TO CLAY?

Circle if Applicable:

<input type="checkbox"/> MS/MSD	Duplicate ID No.:
---------------------------------	-------------------

Signature(s):

*SJC*



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW** Sample ID No.: **BP-VPB132-GW- 641**  
 Project No.: **112G00622** Sample Location: **VPB-132**  
**PRE-DESIGN FIELD INVES** Sampled By: **SJC**

Domestic Well Data C.O.C. No.: **1110**  
 Monitoring Well Data Type of Sample:  
 Other Well Type: **Vertical Profile Boring**  Low Concentration  
 QA Sample Type:  High Concentration

SAMPLING DATA:									TDS
Date:	<b>2/8/12</b>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<b>1000</b>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<b>GRAY</b>	<b>6.37</b>	<b>225</b>	<b>9.88</b>		<b>8.25</b>	<b>-105</b>	<b>-146</b>

PURGE DATA:									
Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2 40ml Glass Vials	✓
TOC	4 DEG C	4 or 8 oz. Glass Jar	✓
VOCs	4DEGC		✓

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft  
 Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.  
 Not enough volume for water quality parameters   
 Check box if not enough volume.  
 Used pH paper instead of water quality meter   
 Check box if used pH paper.

**CLEAN SAND ON SCREEN.**

Circle if Applicable: MS/MSD Duplicate ID No.: Signature(s): *SJC*





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# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-0601**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1110  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date: <u>2/8/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time: <u>1205</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method: <u>Hydropunch</u>	—	—	—	—	—	—	—	—

### PURGE DATA:

Date: <u>NA</u>								
Method: <u>NA</u>								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2- 40ml Glass Vials	NO
TOC	4 DEG C	4 or 8 oz. Glass Jar	

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

NO SAMPLE - SCREEN WAS  
 EXPOSED ONLY 4" AND  
 BOTTOM PORTION WAS COVERED  
 W/ CLAYEY SAND

### Circle if Applicable:

MS/MSD	Duplicate ID No.:
--------	-------------------

Signature(s):

*SJC*



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW- 681**  
Sample Location: **VPB-132**  
Sampled By: **SJC**

- Domestic Well Data
- Monitoring Well Data
- Other Well Type: Vertical Profile Boring
- QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1110  
Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2/8/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1435</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>GRAY</u>	<u>5-6</u>	<u>-</u>	<u>-</u>	<u>&gt;1000</u>	<u>-</u>	<u>-</u>	<u>-</u>

### PURGE DATA:

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>2- 40ml Glass Vials</u>	
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	
<u>T VOCs</u>	<u>4°C</u>	<u>1-40 ml</u>	<input checked="" type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
Check box if not enough volume.

Used pH paper instead of water quality meter  
Check box if used pH paper.

ONLY 1 VIAL - SCREEN WAS EXPOSED ~ 12" - NO CLAY ON SCREEN - BUT HIGH SILT CONTENT

Circle if Applicable:

MS/MSD	Duplicate ID No.:
--------	-------------------

Signature(s):  
SJ Conte



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# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW** Sample ID No.: **BP-VPB132-GW-701**  
 Project No.: **112G00622** Sample Location: **VPB-132**  
**PRE-DESIGN FIELD INVES** Sampled By: **SJC**

Domestic Well Data C.O.C. No.: **1110**  
 Monitoring Well Data Type of Sample:  
 Other Well Type: Vertical Profile Boring  Low Concentration  
 QA Sample Type: \_\_\_\_\_  High Concentration

SAMPLING DATA:									
Date:	<b>2/9/12</b>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<b>1010</b>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<b>GRAY</b>	<b>6.33</b>	<b>-0.74</b>	<b>9.98</b>	<b>800</b>	<b>NA</b>	<b>-36</b>	<b>048</b>

PURGE DATA:									
Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	1 4-40ml Glass Vials	✓
TOC	4 DEG C	4 or 8 oz. Glass Jar	
<b>VOCs</b>	<b>4°C</b>	<b>1-40ml</b>	✓

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  Check box if not enough volume.

Used pH paper instead of water quality meter  Check box if used pH paper.

**GOOD SAMPLE.  
GRAY**

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<b>SJC</b>



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# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-721**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1110  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2/9/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1:30</u>	Visual	Standard	ms/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<u>GRAY</u>	<u>5.6</u>	—	—	<u>&gt;1000</u>	—	—	—

### PURGE DATA:

Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	<del>4</del> 40ml Glass Vials	✓
TOC	4 DEG C	4 or 8 oz. Glass Jar	✓
<u>VOCs</u>	<u>4°C</u>	<u>1-40ml</u>	✓

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

SCREEN OPEN  
NO CLAY  
2 VIALS ONLY

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<u>SJC</u>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-741**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1110  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2/9/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1515</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<u>GRAY</u>	<u>5.36</u>	—	—	—	—	—	—

### PURGE DATA:

Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2- 40ml Glass Vials	
TOC	4 DEG C	4 or 8 oz. Glass Jar 1- 40ml	✓

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

**ONLY 1 VIAL  
 SCREEN EXPOSED  
 ONLY 2" - DUE TO  
 GRAVEL? HP DID  
 NOT STICK.  
 HIGH % OF MUD POSSIBLY  
 IN SAMPLE.**

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<i>SJC</i>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-761**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1111  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2/13/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1215</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>GRAY</u>	<u>5-C</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

### PURGE DATA:

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2- 40ml Glass Vials	
TOC	4 DEG C	4 or 8 oz. Glass Jar	
<u>VOCs</u>	<u>4°C</u>	<u>1 40ml</u>	<input checked="" type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MVW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
--------	-------------------

Signature(s):

*SJC Conte*



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-781**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1111  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2 / 13 / 12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1450</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>GRAY</u>	<u>5-6</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

### PURGE DATA:

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WV):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>1 40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	<input type="checkbox"/>
<u>VOCs</u>	<u>4°C</u>	<u>1 40ml VIAL</u>	<input checked="" type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MV = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

Circle if Applicable: MS/MSD Duplicate ID No.: \_\_\_\_\_ Signature(s): SJC



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW- 801**  
Sample Location: **VPB-132**  
Sampled By: **SJC**

- Domestic Well Data
- Monitoring Well Data
- Other Well Type: Vertical Profile Boring
- QA Sample Type: \_\_\_\_\_

C.O.C. No.: NA  
Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2/14/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1015</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	---	---	---	---	---	---	---	---

### PURGE DATA:

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>2- 40ml Glass Vials</u>	<u>NO</u>
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
Check box if not enough volume.

Used pH paper instead of water quality meter  
Check box if used pH paper.

NO GW WAS OBTAINED  
IN HP. SCREEN WAS  
ONLY EXPOSED 1" AND  
SPOON FROM 801 → 802  
WAS A V. DENSE SILTY  
FINE SAND - MOIST → WET

### Circle if Applicable:

<input type="checkbox"/> MS/MSD	Duplicate ID No.:
---------------------------------	-------------------

Signature(s):





Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-321**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1111  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2/14/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1310</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>GRAY</u>	<u>5-6</u>	<u>—</u>	<u>—</u>	<u>&gt;1000</u>	<u>—</u>	<u>—</u>	<u>—</u>

### PURGE DATA:

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>1 40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	<input checked="" type="checkbox"/>
<u>VOCs</u>	<u>4°C</u>	<u>1 - 40ml</u>	<input checked="" type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

**TURBID SAMPLE - SCREEN EXPOSED 12" - SAND ON SCREEN.**

Circle if Applicable:		Signature(s): <u>SJC</u>
MS/MSD	Duplicate ID No.:	



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**  
 Project No.: **112G00622**  
**PRE-DESIGN FIELD INVES**

Sample ID No.: **BP-VPB132-GW-841**  
 Sample Location: **VPB-132**  
 Sampled By: **SJC**

- Domestic Well Data
- Monitoring Well Data
- Other Well Type: Vertical Profile Boring
- QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1111  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2/14/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1530</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>								

### PURGE DATA:

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2- 40ml Glass Vials	
TOC	4 DEG C	4 or 8 oz. Glass Jar	

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

### Circle if Applicable:

MS/MSD	Duplicate ID No.:
--------	-------------------

### Signature(s):

*SJC*



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: BETHPAGE OU-2 OFFSITE GW  
 Project No.: 112G00622  
PRE-DESIGN FIELD INVES

Sample ID No.: BP-VPB132-GW-861  
 Sample Location: VPB-132  
 Sampled By: SJC

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: Vertical Profile Boring  
 QA Sample Type: \_\_\_\_\_

C.O.C. No.: 1112  
 Type of Sample:  
 Low Concentration  
 High Concentration

### SAMPLING DATA:

Date:	<u>2/15/12</u>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<u>1215</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	<u>Hydropunch</u>	<u>GRAY</u>	<u>5-6</u>	<u>—</u>	<u>—</u>	<u>&gt;1000</u>	<u>—</u>	<u>—</u>	<u>—</u>

### PURGE DATA:

Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>1x 40ml Glass Vials</u>	<input checked="" type="checkbox"/>
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	<input checked="" type="checkbox"/>
<u>VOCs</u>	<u>4°C</u>	<u>1 40ml</u>	<input checked="" type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

**POOR SAMPLE - V., TURBID - DRIVING MUD MIX w/ GW? SCREEN EXPOSED 12", SAND ON SCREEN.**

Circle if Applicable: MS/MSD Duplicate ID No.: \_\_\_\_\_ Signature(s): SJC



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW**      Sample ID No.: BP-VPB132-GW-942  
 Project No.: 112G00622      Sample Location: VPB-132  
PRE-DESIGN FIELD INVES      Sampled By: SJC

Domestic Well Data      C.O.C. No.: 1113  
 Monitoring Well Data      Type of Sample:  
 Other Well Type: Vertical Profile Boring       Low Concentration  
 QA Sample Type: \_\_\_\_\_       High Concentration

SAMPLING DATA:									
Date:	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other	
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA	
<u>2/21/12</u>	<u>GRAY</u>	<u>5.76</u>	<u>-</u>	<u>-</u>	<u>&gt;1000</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Method:	<u>Hydropunch</u>								

PURGE DATA:									
Date:	<u>NA</u>								
Method:	<u>NA</u>								
Monitor Reading (ppm):									
Well Casing Diameter & Material Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	<u>HCL/4 DEG C</u>	<u>2- 40ml Glass Vials</u>	
TOC	<u>4 DEG C</u>	<u>4 or 8 oz. Glass Jar</u>	
VOCs	<u>4 DEG C</u>	<u>1-40ml Glass Vial</u>	<input checked="" type="checkbox"/>

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
 Check box if not enough volume.

Used pH paper instead of water quality meter   
 Check box if used pH paper.

SCREEN EXPOSED 3" ONLY  
DENSE SAND ON SCREEN -  
TR CLAY.

Circle if Applicable:		Signature(s):
<input type="checkbox"/> MS/MSD	Duplicate ID No.:	<u>J. Conte</u>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: **BETHPAGE OU-2 OFFSITE GW** Sample ID No.: **EP-VPB132-SW-021512**  
 Project No.: **112G00622** Sample Location: **VPB-132**  
**PRE-DESIGN FIELD INVES** Sampled By: **SJC**

Domestic Well Data  
 Monitoring Well Data  
 Other Well Type: **Vertical Profile Boring**  
 QA Sample Type: **SOURCE WATER**

C.O.C. No.: **1112**  
 Type of Sample:  
 Low Concentration  
 High Concentration

SAMPLING DATA:									TDS
Date:	<b>2/15/12</b>	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Time:	<b>0930</b>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:	Hydropunch	<b>CLEAR</b>	<b>7.41</b>	<b>265</b>	<b>8.39</b>	<b>0.82</b>	<b>NA</b>	<b>507</b>	<b>172</b>

PURGE DATA:									
Date:	NA								
Method:	NA								
Monitor Reading (ppm):									
Well Casing Diameter & Material									
Type:									
Total Well Depth (TD):									
Static Water Level (WL):									
One Casing Volume(gal/L):									
Start Purge (hrs):									
End Purge (hrs):									
Total Purge Time (min):									
Total Vol. Purged (gal/L):									

SAMPLE COLLECTION INFORMATION: Strike thru analysis not required			
Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	2-40ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>

**OBSERVATIONS / NOTES:**  
 2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters  
 Check box if not enough volume.

Used pH paper instead of water quality meter  
 Check box if used pH paper.

**SOURCE WATER FROM HOSE VIA HYDRANT**

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	<i>SJC</i>



Tetra Tech NUS, Inc.

# GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name:	<b>BETHPAGE OU-2 OFFSITE GW</b>	Sample ID No.:	<b>DM BP-VPB132-<del>DM</del>-850</b>
Project No.:	<b>112G00622</b>	Sample Location:	<b>VPB-132</b>
	<b>PRE-DESIGN FIELD INVES</b>	Sampled By:	<b>SJC</b>
<input type="checkbox"/> Domestic Well Data		C.O.C. No.:	<b>1112</b>
<input type="checkbox"/> Monitoring Well Data		Type of Sample:	
<input checked="" type="checkbox"/> Other Well Type: <u>Vertical Profile Boring</u>		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type: _____		<input type="checkbox"/> High Concentration	

### SAMPLING DATA:

Date:	<b>2/15/12</b>	Color		pH		S.C.		Temp.		Turbidity		DO		ORP		Other	
Time:	<b>1010</b>	Visual		Standard		mS/cm		Degrees C		NTU		mg/l		mV		NA	
Method:	<b>Hydropunch</b>	<b>GRAY</b>		<b>5.6</b>						<b>&gt;1000</b>							

### PURGE DATA:

Date:	<b>NA</b>																
Method:	<b>NA</b>																
Monitor Reading (ppm):																	
Well Casing Diameter & Material																	
Type:																	
Total Well Depth (TD):																	
Static Water Level (WL):																	
One Casing Volume(gal/L):																	
Start Purge (hrs):																	
End Purge (hrs):																	
Total Purge Time (min):																	
Total Vol. Purged (gal/L):																	

### SAMPLE COLLECTION INFORMATION: Strike thru analysis not required

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL/4 DEG C	<b>2</b> 20ml Glass Vials	<input checked="" type="checkbox"/>
TOC	4 DEG C	4 or 8 oz. Glass Jar	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

### OBSERVATIONS / NOTES:

2" MW = 0.163 gal/ft

Sample taken at discreet intervals using a hydropunch sampler unless otherwise noted.

Not enough volume for water quality parameters   
Check box if not enough volume.

Used pH paper instead of water quality meter   
Check box if used pH paper.

*Sample of Drilling Mud - recirculated at ~ 850' BGS*

Circle if Applicable:	Signature(s):
MS/MSD	<i>SJC</i>
Duplicate ID No.:	



# QA SAMPLE LOG SHEET

Project Site Name: BETHPAGE OU-2 OFFSITE Sample ID No.: BP-VPB- TB - 012412  
 Project Number: 112G00622 Sampled By: SJC  
 Sample Location: \_\_\_\_\_ C.O.C. Number: 028405  
 QA Sample Type:  
 Trip Blank  Rinsate Blank  
 Source Water Blank  Other Blank \_\_\_\_\_

### SAMPLING DATA: WATER SOURCE:

Date: 112412  Laboratory Prepared  Tap  
 Time: 1000  Purchased  Fire Hydrant  
 Method: NA  Other \_\_\_\_\_

### PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water): RINSATE INFORMATION (If Applicable):

Product Name: \_\_\_\_\_ Media Type: \_\_\_\_\_  
 Supplier: \_\_\_\_\_ Equipment Used: \_\_\_\_\_  
 Manufacturer: \_\_\_\_\_ Equipment Type: \_\_\_\_\_  
 Order Number: \_\_\_\_\_  Dedicated  
 Lot Number: \_\_\_\_\_  Reusable  
 Expiration Date: \_\_\_\_\_

### SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	Cool 4°C /HCL	<u>2-40</u> ml GLASS VIALS	<u>YES</u> / NO

### OBSERVATIONS / NOTES:

Signature(s): SJC



# QA SAMPLE LOG SHEET

Project Site Name: BETHPAGE OU-2 OFFSITE Sample ID No.: BP-VPB-TB-013012-SJC  
 Project Number: 112G00622 Sampled By: SJC  
 Sample Location: \_\_\_\_\_ C.O.C. Number: 1108  
 QA Sample Type:  
 Trip Blank  Rinsate Blank  
 Source Water Blank  Other Blank \_\_\_\_\_

SAMPLING DATA:	WATER SOURCE:
Date: <u>11/30/12</u> Time: <u>1200</u> Method: <u>NA</u>	<input checked="" type="checkbox"/> Laboratory Prepared <input type="checkbox"/> Tap <input type="checkbox"/> Purchased <input type="checkbox"/> Fire Hydrant <input type="checkbox"/> Other _____

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):	RINSATE INFORMATION (If Applicable):
Product Name: _____ Supplier: _____ Manufacturer: _____ Order Number: _____ Lot Number: _____ Expiration Date: _____	Media Type: _____ Equipment Used: _____ Equipment Type: <input type="checkbox"/> Dedicated <input type="checkbox"/> Reusable

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
VOCs	Cool 4°C /HCL	<u>2-40 ml GLASS VIALS</u>	<u>YES/NO</u>

**OBSERVATIONS / NOTES:**

Signature(s): [Signature]











# QA SAMPLE LOG SHEET

Project Site Name: BETHPAGE OU-2 OFFSITE Sample ID No.: BP-VPB-TB-021512  
 Project Number: 112G00622 Sampled By: SJC  
 Sample Location: \_\_\_\_\_ C.O.C. Number: 1112  
 QA Sample Type:  
 Trip Blank  Rinsate Blank  
 Source Water Blank  Other Blank \_\_\_\_\_

SAMPLING DATA:	WATER SOURCE:
Date: <u>2/15/12</u> Time: <u>0800</u> Method: _____	<input checked="" type="checkbox"/> Laboratory Prepared <input type="checkbox"/> Tap <input type="checkbox"/> Purchased <input type="checkbox"/> Fire Hydrant <input type="checkbox"/> Other _____

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):	RINSATE INFORMATION (If Applicable):
Product Name: _____ Supplier: _____ Manufacturer: _____ Order Number: _____ Lot Number: _____ Expiration Date: _____	Media Type: _____ Equipment Used: _____ Equipment Type: <input type="checkbox"/> Dedicated <input type="checkbox"/> Reusable

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
VOCs	Cool 4°C /HCL	<u>240</u> ml GLASS VIALS	<u>YES</u> / NO

**OBSERVATIONS / NOTES:**

Signature(s): SJC



# QA SAMPLE LOG SHEET

Project Site Name: BETHPAGE OU-2 OFFSITE Sample ID No.: BP-VPB-TB-022112  
 Project Number: 112G00622 Sampled By: SJC  
 Sample Location: \_\_\_\_\_ C.O.C. Number: 1113  
 QA Sample Type:  
 Trip Blank  Rinsate Blank  
 Source Water Blank  Other Blank \_\_\_\_\_

SAMPLING DATA:	WATER SOURCE:
Date: <u>2/21/12</u> Time: <u>1000</u> Method: <u>NA</u>	<input checked="" type="checkbox"/> Laboratory Prepared <input type="checkbox"/> Tap <input type="checkbox"/> Purchased <input type="checkbox"/> Fire Hydrant <input type="checkbox"/> Other _____

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):	RINSATE INFORMATION (If Applicable):
Product Name: _____ Supplier: _____ Manufacturer: _____ Order Number: _____ Lot Number: _____ Expiration Date: _____	Media Type: _____ Equipment Used: _____ Equipment Type: <input type="checkbox"/> Dedicated <input type="checkbox"/> Reusable

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
VOCs	Cool 4°C /HCL	<u>2</u> -40 ml GLASS VIALS	<u>YES</u> / NO

**OBSERVATIONS / NOTES:**

Signature(s): SJC

**Section 4**  
**VPB 132 Analytical Data Sheets**  
**(Chemtech and AirToxics)**

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/24/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-061	SDG No.:	D1310
Lab Sample ID:	D1310-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040611.D	1		01/31/12	vg013112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	15		0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
67-66-3	Chloroform	2.2		0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L





## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/24/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-121	SDG No.:	D1310
Lab Sample ID:	D1310-03	Matrix:	SOIL
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	4.94 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF030983.D	1		01/27/12	VF012712

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.55	U	0.66	5.1	ug/Kg
74-87-3	Chloromethane	2.55	U	0.87	5.1	ug/Kg
75-01-4	Vinyl Chloride	2.55	U	1.2	5.1	ug/Kg
74-83-9	Bromomethane	2.55	U	2.5	5.1	ug/Kg
75-00-3	Chloroethane	2.55	U	1.4	5.1	ug/Kg
75-69-4	Trichlorofluoromethane	2.55	U	1.3	5.1	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.55	U	1.3	5.1	ug/Kg
75-35-4	1,1-Dichloroethene	2.55	U	1.5	5.1	ug/Kg
67-64-1	Acetone	11	J	3.1	25	ug/Kg
75-15-0	Carbon Disulfide	2.55	U	1.1	5.1	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.55	U	0.97	5.1	ug/Kg
79-20-9	Methyl Acetate	2.55	U	1.5	5.1	ug/Kg
75-09-2	Methylene Chloride	2.55	U	1.4	5.1	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.55	U	0.7	5.1	ug/Kg
75-34-3	1,1-Dichloroethane	2.55	U	0.95	5.1	ug/Kg
110-82-7	Cyclohexane	2.55	U	1	5.1	ug/Kg
78-93-3	2-Butanone	12.5	U	3.1	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.55	U	1	5.1	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.55	U	0.9	5.1	ug/Kg
67-66-3	Chloroform	2.55	U	0.75	5.1	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.55	U	0.89	5.1	ug/Kg
108-87-2	Methylcyclohexane	2.55	U	1.1	5.1	ug/Kg
71-43-2	Benzene	2.55	U	0.38	5.1	ug/Kg
107-06-2	1,2-Dichloroethane	2.55	U	0.65	5.1	ug/Kg
79-01-6	Trichloroethene	2.55	U	0.87	5.1	ug/Kg
78-87-5	1,2-Dichloropropane	2.55	U	0.26	5.1	ug/Kg
75-27-4	Bromodichloromethane	2.55	U	0.63	5.1	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	3	25	ug/Kg
108-88-3	Toluene	2.55	U	0.65	5.1	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.55	U	0.8	5.1	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.55	U	0.73	5.1	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/24/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-121	SDG No.:	D1310
Lab Sample ID:	D1310-03	Matrix:	SOIL
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	4.94 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF030983.D	1		01/27/12	VF012712

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.55	U	0.91	5.1	ug/Kg
591-78-6	2-Hexanone	12.5	U	4	25	ug/Kg
124-48-1	Dibromochloromethane	2.55	U	0.55	5.1	ug/Kg
106-93-4	1,2-Dibromoethane	2.55	U	0.65	5.1	ug/Kg
127-18-4	Tetrachloroethene	2.55	U	1	5.1	ug/Kg
108-90-7	Chlorobenzene	2.55	U	0.51	5.1	ug/Kg
100-41-4	Ethyl Benzene	2.55	U	0.63	5.1	ug/Kg
179601-23-1	m/p-Xylenes	5	U	0.73	10	ug/Kg
95-47-6	o-Xylene	2.55	U	0.69	5.1	ug/Kg
100-42-5	Styrene	2.55	U	0.46	5.1	ug/Kg
75-25-2	Bromoform	2.55	U	0.75	5.1	ug/Kg
98-82-8	Isopropylbenzene	2.55	U	0.49	5.1	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.55	U	0.47	5.1	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.55	U	0.37	5.1	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.55	U	0.41	5.1	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.55	U	0.63	5.1	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.55	U	0.88	5.1	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.55	U	0.71	5.1	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	33.1		55 - 158	66%	SPK: 50
1868-53-7	Dibromofluoromethane	44.9		53 - 156	90%	SPK: 50
2037-26-5	Toluene-d8	50.1		85 - 115	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.5		85 - 120	101%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	180732	4.39			
540-36-3	1,4-Difluorobenzene	290337	5.13			
3114-55-4	Chlorobenzene-d5	268410	9.33			
3855-82-1	1,4-Dichlorobenzene-d4	147017	12.25			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
000111-84-2	Nonane	13	J		9.48	ug/Kg
001678-92-8	Cyclohexane, propyl-	17	J		10.28	ug/Kg
062960-76-3	4-Octene, 2,6-dimethyl-, [S-(E)]-	11	J		10.91	ug/Kg



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/25/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-181	SDG No.:	D1310
Lab Sample ID:	D1310-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040612.D	1		01/31/12	vg013112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.66	J	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/25/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-181	SDG No.:	D1310
Lab Sample ID:	D1310-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040612.D	1		01/31/12	vg013112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	55.5		70 - 120	111%	SPK: 50
1868-53-7	Dibromofluoromethane	49.9		85 - 115	100%	SPK: 50
2037-26-5	Toluene-d8	41.1	*	85 - 120	82%	SPK: 50
460-00-4	4-Bromofluorobenzene	38.2		75 - 120	76%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1557680	3.88			
540-36-3	1,4-Difluorobenzene	2041090	4.68			
3114-55-4	Chlorobenzene-d5	1543270	9.66			
3855-82-1	1,4-Dichlorobenzene-d4	792615	13.38			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/25/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-221	SDG No.:	D1310
Lab Sample ID:	D1310-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040613.D	1		01/31/12	vg013112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	1.7		0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	1.1		0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52		70 - 120	104%	SPK: 50
1868-53-7	Dibromofluoromethane	50.1		85 - 115	100%	SPK: 50
2037-26-5	Toluene-d8	42.8		85 - 120	86%	SPK: 50
460-00-4	4-Bromofluorobenzene	40.3		75 - 120	81%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1634240	3.88			
540-36-3	1,4-Difluorobenzene	2073400	4.69			
3114-55-4	Chlorobenzene-d5	1536140	9.67			
3855-82-1	1,4-Dichlorobenzene-d4	764534	13.37			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
000078-78-4	Butane, 2-methyl-	20	J		1.06	ug/L
74-88-4	Methyl Iodide	0.49	J		1.49	ug/L
000287-92-3	Cyclopentane	32	J		1.61	ug/L

**Report of Analysis**

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/25/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-221	SDG No.:	D1310
Lab Sample ID:	D1310-05	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040613.D	1		01/31/12	vg013112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
000096-14-0	Pentane, 3-methyl-	17	J		1.74	ug/L
108-20-3	Diisopropyl ether	1.0	J		2.2	ug/L

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/25/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-221DL	SDG No.:	D1310
Lab Sample ID:	D1310-05DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040651.D	5		02/01/12	VG020112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.5	U	1	5	ug/L
74-87-3	Chloromethane	2.5	U	1	5	ug/L
75-01-4	Vinyl Chloride	2.5	U	1.7	5	ug/L
74-83-9	Bromomethane	2.5	U	1	5	ug/L
75-00-3	Chloroethane	2.5	U	1	5	ug/L
75-69-4	Trichlorofluoromethane	2.5	U	1.8	5	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.2	5	ug/L
75-35-4	1,1-Dichloroethene	2.5	U	2.4	5	ug/L
67-64-1	Acetone	12.5	U	2.5	25	ug/L
75-15-0	Carbon Disulfide	2.5	U	1	5	ug/L
1634-04-4	Methyl tert-butyl Ether	15	D	1.8	5	ug/L
79-20-9	Methyl Acetate	2.5	U	1	5	ug/L
75-09-2	Methylene Chloride	2.5	U	2	5	ug/L
156-60-5	trans-1,2-Dichloroethene	2.5	U	2	5	ug/L
75-34-3	1,1-Dichloroethane	5.8	D	1.8	5	ug/L
110-82-7	Cyclohexane	2.5	U	1	5	ug/L
78-93-3	2-Butanone	12.5	U	6.6	25	ug/L
56-23-5	Carbon Tetrachloride	2.5	U	1	5	ug/L
156-59-2	cis-1,2-Dichloroethene	2.5	U	1.8	5	ug/L
67-66-3	Chloroform	2.5	U	1.7	5	ug/L
71-55-6	1,1,1-Trichloroethane	2.5	U	2	5	ug/L
108-87-2	Methylcyclohexane	2.5	U	1	5	ug/L
71-43-2	Benzene	280	D	1.6	5	ug/L
107-06-2	1,2-Dichloroethane	2.5	U	2.4	5	ug/L
79-01-6	Trichloroethene	2.5	U	1.4	5	ug/L
78-87-5	1,2-Dichloropropane	2.5	U	2.3	5	ug/L
75-27-4	Bromodichloromethane	2.5	U	1.8	5	ug/L
108-10-1	4-Methyl-2-Pentanone	12.5	U	10	25	ug/L
108-88-3	Toluene	2.5	U	1.8	5	ug/L
10061-02-6	t-1,3-Dichloropropene	2.5	U	1.4	5	ug/L
10061-01-5	cis-1,3-Dichloropropene	2.5	U	1.6	5	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/25/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-221DL	SDG No.:	D1310
Lab Sample ID:	D1310-05DL	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040651.D	5		02/01/12	VG020112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	1.9	5	ug/L
591-78-6	2-Hexanone	12.5	U	9.7	25	ug/L
124-48-1	Dibromochloromethane	2.5	U	1	5	ug/L
106-93-4	1,2-Dibromoethane	2.5	U	2	5	ug/L
127-18-4	Tetrachloroethene	2.5	U	1.4	5	ug/L
108-90-7	Chlorobenzene	2.5	U	2.4	5	ug/L
100-41-4	Ethyl Benzene	2.5	U	1	5	ug/L
179601-23-1	m/p-Xylenes	5	U	4.8	10	ug/L
95-47-6	o-Xylene	2.5	U	2.2	5	ug/L
100-42-5	Styrene	2.5	U	1.8	5	ug/L
75-25-2	Bromoform	2.5	U	2.4	5	ug/L
98-82-8	Isopropylbenzene	2.5	U	2.2	5	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	1.6	5	ug/L
541-73-1	1,3-Dichlorobenzene	2.5	U	2.2	5	ug/L
106-46-7	1,4-Dichlorobenzene	2.5	U	1.6	5	ug/L
95-50-1	1,2-Dichlorobenzene	2.5	U	2.2	5	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.3	5	ug/L
120-82-1	1,2,4-Trichlorobenzene	2.5	U	1	5	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.8		70 - 120	106%	SPK: 50
1868-53-7	Dibromofluoromethane	48.7		85 - 115	97%	SPK: 50
2037-26-5	Toluene-d8	48.4		85 - 120	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.6		75 - 120	79%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1665210	3.88			
540-36-3	1,4-Difluorobenzene	2192040	4.68			
3114-55-4	Chlorobenzene-d5	1677840	9.66			
3855-82-1	1,4-Dichlorobenzene-d4	839866	13.37			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/25/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-241	SDG No.:	D1310
Lab Sample ID:	D1310-06	Matrix:	SOIL
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5.05      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031038.D	1		01/31/12	VF013112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	0.89	5	ug/Kg
591-78-6	2-Hexanone	12.5	U	3.9	25	ug/Kg
124-48-1	Dibromochloromethane	2.5	U	0.53	5	ug/Kg
106-93-4	1,2-Dibromoethane	2.5	U	0.63	5	ug/Kg
127-18-4	Tetrachloroethene	2.5	U	1	5	ug/Kg
108-90-7	Chlorobenzene	2.5	U	0.5	5	ug/Kg
100-41-4	Ethyl Benzene	2.5	U	0.61	5	ug/Kg
179601-23-1	m/p-Xylenes	4.95	U	0.71	9.9	ug/Kg
95-47-6	o-Xylene	2.5	U	0.67	5	ug/Kg
100-42-5	Styrene	2.5	U	0.45	5	ug/Kg
75-25-2	Bromoform	2.5	U	0.73	5	ug/Kg
98-82-8	Isopropylbenzene	2.5	U	0.48	5	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	0.46	5	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.5	U	0.37	5	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.5	U	0.41	5	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.5	U	0.61	5	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	0.86	5	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.5	U	0.69	5	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	39.7		55 - 158	79%	SPK: 50
1868-53-7	Dibromofluoromethane	44.2		53 - 156	89%	SPK: 50
2037-26-5	Toluene-d8	46		85 - 115	92%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.2		85 - 120	90%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	172272	4.37			
540-36-3	1,4-Difluorobenzene	287938	5.11			
3114-55-4	Chlorobenzene-d5	265741	9.3			
3855-82-1	1,4-Dichlorobenzene-d4	132397	12.23			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
000066-25-1	Hexanal	5.0	J		9.02	ug/Kg
000111-84-2	Nonane	5.4	J		9.46	ug/Kg
	unknown10.26	6.9	J		10.26	ug/Kg



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/26/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-261	SDG No.:	D1310
Lab Sample ID:	D1310-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040614.D	1		01/31/12	vg013112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	3.8		0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	5.1		0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/26/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-261	SDG No.:	D1310
Lab Sample ID:	D1310-07	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040614.D	1		01/31/12	vg013112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	54.2		70 - 120	108%	SPK: 50
1868-53-7	Dibromofluoromethane	49.3		85 - 115	99%	SPK: 50
2037-26-5	Toluene-d8	41.8	*	85 - 120	84%	SPK: 50
460-00-4	4-Bromofluorobenzene	38.3		75 - 120	77%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1600460	3.87			
540-36-3	1,4-Difluorobenzene	2128580	4.69			
3114-55-4	Chlorobenzene-d5	1546070	9.66			
3855-82-1	1,4-Dichlorobenzene-d4	781813	13.38			

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/26/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-281	SDG No.:	D1310
Lab Sample ID:	D1310-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040615.D	1		01/31/12	vg013112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	1	ug/L
67-64-1	Acetone	2.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.57	J	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	1	ug/L
71-43-2	Benzene	0.5	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	5	ug/L
108-88-3	Toluene	0.5	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	1	ug/L



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/26/12
Project:	Bethpage CTO-066	Date Received:	01/27/12
Client Sample ID:	BP-VPB132-GW-281	SDG No.:	D1310
Lab Sample ID:	D1310-08	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040615.D	1		01/31/12	vg013112

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	1	ug/L
100-42-5	Styrene	0.5	U	0.36	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	53.6		70 - 120	107%	SPK: 50
1868-53-7	Dibromofluoromethane	47.6		85 - 115	95%	SPK: 50
2037-26-5	Toluene-d8	46.3		85 - 120	93%	SPK: 50
460-00-4	4-Bromofluorobenzene	39		75 - 120	78%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1612060	3.89			
540-36-3	1,4-Difluorobenzene	2112770	4.69			
3114-55-4	Chlorobenzene-d5	1612650	9.67			
3855-82-1	1,4-Dichlorobenzene-d4	775627	13.37			

**Report of Analysis**

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/30/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-301	SDG No.:	D1396
Lab Sample ID:	D1396-02	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040730.D	1		02/03/12	VG020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L











## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/31/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-341	SDG No.:	D1396
Lab Sample ID:	D1396-04	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040732.D	1		02/03/12	VG020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/31/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-341	SDG No.:	D1396
Lab Sample ID:	D1396-04	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040732.D	1		02/03/12	VG020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	60.2		70 - 120	120%	SPK: 50
1868-53-7	Dibromofluoromethane	50.9		85 - 115	102%	SPK: 50
2037-26-5	Toluene-d8	44.4		85 - 120	89%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.9		75 - 120	84%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	961661	3.88			
540-36-3	1,4-Difluorobenzene	1322260	4.68			
3114-55-4	Chlorobenzene-d5	1109660	9.66			
3855-82-1	1,4-Dichlorobenzene-d4	544612	13.37			











## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/31/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-381	SDG No.:	D1396
Lab Sample ID:	D1396-06	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040734.D	1		02/03/12	VG020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	57.3		70 - 120	115%	SPK: 50
1868-53-7	Dibromofluoromethane	51.2		85 - 115	102%	SPK: 50
2037-26-5	Toluene-d8	43		85 - 120	86%	SPK: 50
460-00-4	4-Bromofluorobenzene	40.1		75 - 120	80%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	962628	3.88			
540-36-3	1,4-Difluorobenzene	1296290	4.69			
3114-55-4	Chlorobenzene-d5	1072160	9.66			
3855-82-1	1,4-Dichlorobenzene-d4	560743	13.37			





## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/01/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-401	SDG No.:	D1396
Lab Sample ID:	D1396-07	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040735.D	1		02/03/12	VG020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/01/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-401	SDG No.:	D1396
Lab Sample ID:	D1396-07	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040735.D	1		02/03/12	VG020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	59.4		70 - 120	119%	SPK: 50
1868-53-7	Dibromofluoromethane	49.9		85 - 115	100%	SPK: 50
2037-26-5	Toluene-d8	46		85 - 120	92%	SPK: 50
460-00-4	4-Bromofluorobenzene	41		75 - 120	82%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	980460	3.87			
540-36-3	1,4-Difluorobenzene	1323010	4.69			
3114-55-4	Chlorobenzene-d5	1100070	9.66			
3855-82-1	1,4-Dichlorobenzene-d4	555221	13.37			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/01/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-421	SDG No.:	D1396
Lab Sample ID:	D1396-08	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040781.D	1		02/06/12	VG020612

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/01/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-421	SDG No.:	D1396
Lab Sample ID:	D1396-08	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040781.D	1		02/06/12	VG020612

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	58.1		70 - 120	116%	SPK: 50
1868-53-7	Dibromofluoromethane	48.8		85 - 115	98%	SPK: 50
2037-26-5	Toluene-d8	45.3		85 - 120	91%	SPK: 50
460-00-4	4-Bromofluorobenzene	38.7		75 - 120	77%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1115520	3.9			
540-36-3	1,4-Difluorobenzene	1595760	4.7			
3114-55-4	Chlorobenzene-d5	1285230	9.67			
3855-82-1	1,4-Dichlorobenzene-d4	641792	13.39			











## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/02/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-461	SDG No.:	D1396
Lab Sample ID:	D1396-10	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031128.D	1		02/03/12	VF020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.5	U	2.5	5	ug/Kg
74-87-3	Chloromethane	2.5	U	2.5	5	ug/Kg
75-01-4	Vinyl Chloride	2.5	U	2.5	5	ug/Kg
74-83-9	Bromomethane	2.5	U	2.5	5	ug/Kg
75-00-3	Chloroethane	2.5	U	2.5	5	ug/Kg
75-69-4	Trichlorofluoromethane	2.5	U	2.5	5	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.5	5	ug/Kg
75-35-4	1,1-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-64-1	Acetone	29		12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.5	U	2.5	5	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.5	U	2.5	5	ug/Kg
79-20-9	Methyl Acetate	2.5	U	2.5	5	ug/Kg
75-09-2	Methylene Chloride	13	B	2.5	5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
75-34-3	1,1-Dichloroethane	2.5	U	2.5	5	ug/Kg
110-82-7	Cyclohexane	2.5	U	2.5	5	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.5	U	2.5	5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-66-3	Chloroform	2.5	U	2.5	5	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	5	ug/Kg
108-87-2	Methylcyclohexane	2.5	U	2.5	5	ug/Kg
71-43-2	Benzene	2.5	U	2.5	5	ug/Kg
107-06-2	1,2-Dichloroethane	2.5	U	2.5	5	ug/Kg
79-01-6	Trichloroethene	2.5	U	2.5	5	ug/Kg
78-87-5	1,2-Dichloropropane	2.5	U	2.5	5	ug/Kg
75-27-4	Bromodichloromethane	2.5	U	2.5	5	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.5	U	2.5	5	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/02/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-461	SDG No.:	D1396
Lab Sample ID:	D1396-10	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031128.D	1		02/03/12	VF020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	5	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.5	U	2.5	5	ug/Kg
106-93-4	1,2-Dibromoethane	2.5	U	2.5	5	ug/Kg
127-18-4	Tetrachloroethene	2.5	U	2.5	5	ug/Kg
108-90-7	Chlorobenzene	2.5	U	2.5	5	ug/Kg
100-41-4	Ethyl Benzene	2.5	U	2.5	5	ug/Kg
179601-23-1	m/p-Xylenes	5	U	5	10	ug/Kg
95-47-6	o-Xylene	2.5	U	2.5	5	ug/Kg
100-42-5	Styrene	2.5	U	2.5	5	ug/Kg
75-25-2	Bromoform	2.5	U	2.5	5	ug/Kg
98-82-8	Isopropylbenzene	2.5	U	2.5	5	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	5	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.5	5	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	5	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	48.3		55 - 158	97%	SPK: 50
1868-53-7	Dibromofluoromethane	51.2		53 - 156	103%	SPK: 50
2037-26-5	Toluene-d8	46.8		85 - 115	94%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.8		85 - 120	96%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	117034	4.36			
540-36-3	1,4-Difluorobenzene	196305	5.1			
3114-55-4	Chlorobenzene-d5	186562	9.29			
3855-82-1	1,4-Dichlorobenzene-d4	92471	12.22			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/02/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-481	SDG No.:	D1396
Lab Sample ID:	D1396-11	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040738.D	1		02/03/12	VG020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L









## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/02/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB132-GW-501	SDG No.:	D1396
Lab Sample ID:	D1396-12	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040739.D	1		02/03/12	VG020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	58		70 - 120	116%	SPK: 50
1868-53-7	Dibromofluoromethane	50.5		85 - 115	101%	SPK: 50
2037-26-5	Toluene-d8	45.7		85 - 120	91%	SPK: 50
460-00-4	4-Bromofluorobenzene	40.4		75 - 120	81%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	960711	3.88			
540-36-3	1,4-Difluorobenzene	1317660	4.69			
3114-55-4	Chlorobenzene-d5	1077270	9.66			
3855-82-1	1,4-Dichlorobenzene-d4	545455	13.37			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/03/12
Project:	Bethpage CTO-066	Date Received:	02/08/12
Client Sample ID:	BP-VPB132-GW-521	SDG No.:	D1437
Lab Sample ID:	D1437-02	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003575.D	1		02/10/12	VR021012

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/03/12
Project:	Bethpage CTO-066	Date Received:	02/08/12
Client Sample ID:	BP-VPB132-GW-521	SDG No.:	D1437
Lab Sample ID:	D1437-02	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003575.D	1		02/10/12	VR021012

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	47		70 - 120	94%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	46.2		85 - 120	92%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.3		75 - 120	93%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1685280	7.58			
540-36-3	1,4-Difluorobenzene	2791760	8.5			
3114-55-4	Chlorobenzene-d5	2297480	11.31			
3855-82-1	1,4-Dichlorobenzene-d4	1394100	13.26			





## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/06/12
Project:	Bethpage CTO-066	Date Received:	02/08/12
Client Sample ID:	BP-VPB132-GW-541	SDG No.:	D1437
Lab Sample ID:	D1437-03	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003576.D	1		02/10/12	VR021012

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	45.9		70 - 120	92%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	46.2		85 - 120	92%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.8		75 - 120	94%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1716230	7.58			
540-36-3	1,4-Difluorobenzene	2776800	8.5			
3114-55-4	Chlorobenzene-d5	2303830	11.31			
3855-82-1	1,4-Dichlorobenzene-d4	1397750	13.26			





## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/06/12
Project:	Bethpage CTO-066	Date Received:	02/08/12
Client Sample ID:	BP-VPB132-GW-561	SDG No.:	D1437
Lab Sample ID:	D1437-04	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003577.D	1		02/10/12	VR021012

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	13		2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/06/12
Project:	Bethpage CTO-066	Date Received:	02/08/12
Client Sample ID:	BP-VPB132-GW-561	SDG No.:	D1437
Lab Sample ID:	D1437-04	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003577.D	1		02/10/12	VR021012

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	45.9		70 - 120	92%	SPK: 50
1868-53-7	Dibromofluoromethane	48		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	46.2		85 - 120	92%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.1		75 - 120	92%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1725320	7.58			
540-36-3	1,4-Difluorobenzene	2788240	8.5			
3114-55-4	Chlorobenzene-d5	2279740	11.31			
3855-82-1	1,4-Dichlorobenzene-d4	1388900	13.26			





## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/07/12
Project:	Bethpage CTO-066	Date Received:	02/08/12
Client Sample ID:	BP-VPB132-GW-581	SDG No.:	D1437
Lab Sample ID:	D1437-05	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040837.D	1		02/08/12	VG020812

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	59.3		70 - 120	119%	SPK: 50
1868-53-7	Dibromofluoromethane	49.2		85 - 115	98%	SPK: 50
2037-26-5	Toluene-d8	44.7		85 - 120	89%	SPK: 50
460-00-4	4-Bromofluorobenzene	37.6		75 - 120	75%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	824371	3.9			
540-36-3	1,4-Difluorobenzene	1158990	4.71			
3114-55-4	Chlorobenzene-d5	915123	9.68			
3855-82-1	1,4-Dichlorobenzene-d4	467050	13.38			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/07/12
Project:	Bethpage CTO-066	Date Received:	02/08/12
Client Sample ID:	BP-VPB132-GW-601	SDG No.:	D1437
Lab Sample ID:	D1437-06	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040838.D	1		02/08/12	VG020812

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L









## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/08/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-641	SDG No.:	D1473
Lab Sample ID:	D1473-02	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003623.D	1		02/14/12	VR021412

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	46.9		70 - 120	94%	SPK: 50
1868-53-7	Dibromofluoromethane	47.4		85 - 115	95%	SPK: 50
2037-26-5	Toluene-d8	46		85 - 120	92%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.7		75 - 120	91%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1580800	7.58			
540-36-3	1,4-Difluorobenzene	2597590	8.5			
3114-55-4	Chlorobenzene-d5	2131510	11.31			
3855-82-1	1,4-Dichlorobenzene-d4	1310990	13.26			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/08/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-681	SDG No.:	D1473
Lab Sample ID:	D1473-03	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.02 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031206.D	1		02/13/12	VF021312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.5	U	2.5	5	ug/Kg
74-87-3	Chloromethane	2.5	U	2.5	5	ug/Kg
75-01-4	Vinyl Chloride	2.5	U	2.5	5	ug/Kg
74-83-9	Bromomethane	2.5	U	2.5	5	ug/Kg
75-00-3	Chloroethane	2.5	U	2.5	5	ug/Kg
75-69-4	Trichlorofluoromethane	2.5	U	2.5	5	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.5	5	ug/Kg
75-35-4	1,1-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-64-1	Acetone	18	J	12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.5	U	2.5	5	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.5	U	2.5	5	ug/Kg
79-20-9	Methyl Acetate	2.5	U	2.5	5	ug/Kg
75-09-2	Methylene Chloride	2.5	U	2.5	5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
75-34-3	1,1-Dichloroethane	2.5	U	2.5	5	ug/Kg
110-82-7	Cyclohexane	2.5	U	2.5	5	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.5	U	2.5	5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-66-3	Chloroform	2.5	U	2.5	5	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	5	ug/Kg
108-87-2	Methylcyclohexane	2.5	U	2.5	5	ug/Kg
71-43-2	Benzene	2.5	U	2.5	5	ug/Kg
107-06-2	1,2-Dichloroethane	2.5	U	2.5	5	ug/Kg
79-01-6	Trichloroethene	2.5	U	2.5	5	ug/Kg
78-87-5	1,2-Dichloropropane	2.5	U	2.5	5	ug/Kg
75-27-4	Bromodichloromethane	2.5	U	2.5	5	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.5	U	2.5	5	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/08/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-681	SDG No.:	D1473
Lab Sample ID:	D1473-03	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.02 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID: 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031206.D	1		02/13/12	VF021312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	5	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.5	U	2.5	5	ug/Kg
106-93-4	1,2-Dibromoethane	2.5	U	2.5	5	ug/Kg
127-18-4	Tetrachloroethene	2.5	U	2.5	5	ug/Kg
108-90-7	Chlorobenzene	2.5	U	2.5	5	ug/Kg
100-41-4	Ethyl Benzene	2.5	U	2.5	5	ug/Kg
179601-23-1	m/p-Xylenes	5	U	5	10	ug/Kg
95-47-6	o-Xylene	2.5	U	2.5	5	ug/Kg
100-42-5	Styrene	2.5	U	2.5	5	ug/Kg
75-25-2	Bromoform	2.5	U	2.5	5	ug/Kg
98-82-8	Isopropylbenzene	2.5	U	2.5	5	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	5	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.5	5	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	5	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	51.1		55 - 158	102%	SPK: 50
1868-53-7	Dibromofluoromethane	52.2		53 - 156	104%	SPK: 50
2037-26-5	Toluene-d8	47.6		85 - 115	95%	SPK: 50
460-00-4	4-Bromofluorobenzene	40.4	*	85 - 120	81%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	119835	4.38			
540-36-3	1,4-Difluorobenzene	192614	5.13			
3114-55-4	Chlorobenzene-d5	178427	9.32			
3855-82-1	1,4-Dichlorobenzene-d4	81166	12.24			

**Report of Analysis**

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/08/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-681	SDG No.:	D1473
Lab Sample ID:	D1473-03	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.02      Units:    g	Final Vol:	5000            uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624      ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031206.D	1		02/13/12	VF021312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/08/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-681RE	SDG No.:	D1473
Lab Sample ID:	D1473-03RE	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.97 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031220.D	1		02/14/12	VF021412

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.5	U	2.5	5	ug/Kg
74-87-3	Chloromethane	2.5	U	2.5	5	ug/Kg
75-01-4	Vinyl Chloride	2.5	U	2.5	5	ug/Kg
74-83-9	Bromomethane	2.5	U	2.5	5	ug/Kg
75-00-3	Chloroethane	2.5	U	2.5	5	ug/Kg
75-69-4	Trichlorofluoromethane	2.5	U	2.5	5	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.5	5	ug/Kg
75-35-4	1,1-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-64-1	Acetone	19	J	12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.5	U	2.5	5	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.5	U	2.5	5	ug/Kg
79-20-9	Methyl Acetate	2.5	U	2.5	5	ug/Kg
75-09-2	Methylene Chloride	2.5	U	2.5	5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
75-34-3	1,1-Dichloroethane	2.5	U	2.5	5	ug/Kg
110-82-7	Cyclohexane	2.5	U	2.5	5	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.5	U	2.5	5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-66-3	Chloroform	2.5	U	2.5	5	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	5	ug/Kg
108-87-2	Methylcyclohexane	2.5	U	2.5	5	ug/Kg
71-43-2	Benzene	2.5	U	2.5	5	ug/Kg
107-06-2	1,2-Dichloroethane	2.5	U	2.5	5	ug/Kg
79-01-6	Trichloroethene	2.5	U	2.5	5	ug/Kg
78-87-5	1,2-Dichloropropane	2.5	U	2.5	5	ug/Kg
75-27-4	Bromodichloromethane	2.5	U	2.5	5	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.5	U	2.5	5	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/08/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-681RE	SDG No.:	D1473
Lab Sample ID:	D1473-03RE	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.97 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031220.D	1		02/14/12	VF021412

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	5	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.5	U	2.5	5	ug/Kg
106-93-4	1,2-Dibromoethane	2.5	U	2.5	5	ug/Kg
127-18-4	Tetrachloroethene	2.5	U	2.5	5	ug/Kg
108-90-7	Chlorobenzene	2.5	U	2.5	5	ug/Kg
100-41-4	Ethyl Benzene	2.5	U	2.5	5	ug/Kg
179601-23-1	m/p-Xylenes	5	U	5	10	ug/Kg
95-47-6	o-Xylene	2.5	U	2.5	5	ug/Kg
100-42-5	Styrene	2.5	U	2.5	5	ug/Kg
75-25-2	Bromoform	2.5	U	2.5	5	ug/Kg
98-82-8	Isopropylbenzene	2.5	U	2.5	5	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	5	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.5	5	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	5	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	41.6		55 - 158	83%	SPK: 50
1868-53-7	Dibromofluoromethane	45.2		53 - 156	90%	SPK: 50
2037-26-5	Toluene-d8	45		85 - 115	90%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.8	*	85 - 120	80%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	116325	4.37			
540-36-3	1,4-Difluorobenzene	184875	5.11			
3114-55-4	Chlorobenzene-d5	174275	9.32			
3855-82-1	1,4-Dichlorobenzene-d4	82377	12.23			





## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/09/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-701	SDG No.:	D1473
Lab Sample ID:	D1473-04	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003624.D	1		02/14/12	VR021412

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	46.7		70 - 120	93%	SPK: 50
1868-53-7	Dibromofluoromethane	47.9		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	46		85 - 120	92%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.8		75 - 120	92%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1579080	7.58			
540-36-3	1,4-Difluorobenzene	2573290	8.5			
3114-55-4	Chlorobenzene-d5	2120450	11.31			
3855-82-1	1,4-Dichlorobenzene-d4	1303730	13.26			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/09/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-721	SDG No.:	D1473
Lab Sample ID:	D1473-05	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.99 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031207.D	1		02/13/12	VF021312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.5	U	2.5	5	ug/Kg
74-87-3	Chloromethane	2.5	U	2.5	5	ug/Kg
75-01-4	Vinyl Chloride	2.5	U	2.5	5	ug/Kg
74-83-9	Bromomethane	2.5	U	2.5	5	ug/Kg
75-00-3	Chloroethane	2.5	U	2.5	5	ug/Kg
75-69-4	Trichlorofluoromethane	2.5	U	2.5	5	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.5	5	ug/Kg
75-35-4	1,1-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-64-1	Acetone	15	J	12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.5	U	2.5	5	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.5	U	2.5	5	ug/Kg
79-20-9	Methyl Acetate	2.5	U	2.5	5	ug/Kg
75-09-2	Methylene Chloride	2.5	U	2.5	5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
75-34-3	1,1-Dichloroethane	2.5	U	2.5	5	ug/Kg
110-82-7	Cyclohexane	2.5	U	2.5	5	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.5	U	2.5	5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-66-3	Chloroform	2.5	U	2.5	5	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	5	ug/Kg
108-87-2	Methylcyclohexane	2.5	U	2.5	5	ug/Kg
71-43-2	Benzene	2.5	U	2.5	5	ug/Kg
107-06-2	1,2-Dichloroethane	2.5	U	2.5	5	ug/Kg
79-01-6	Trichloroethene	2.5	U	2.5	5	ug/Kg
78-87-5	1,2-Dichloropropane	2.5	U	2.5	5	ug/Kg
75-27-4	Bromodichloromethane	2.5	U	2.5	5	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.5	U	2.5	5	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/09/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-721	SDG No.:	D1473
Lab Sample ID:	D1473-05	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.99 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031207.D	1		02/13/12	VF021312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	5	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.5	U	2.5	5	ug/Kg
106-93-4	1,2-Dibromoethane	2.5	U	2.5	5	ug/Kg
127-18-4	Tetrachloroethene	2.5	U	2.5	5	ug/Kg
108-90-7	Chlorobenzene	2.5	U	2.5	5	ug/Kg
100-41-4	Ethyl Benzene	2.5	U	2.5	5	ug/Kg
179601-23-1	m/p-Xylenes	5	U	5	10	ug/Kg
95-47-6	o-Xylene	2.5	U	2.5	5	ug/Kg
100-42-5	Styrene	2.5	U	2.5	5	ug/Kg
75-25-2	Bromoform	2.5	U	2.5	5	ug/Kg
98-82-8	Isopropylbenzene	2.5	U	2.5	5	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	5	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.5	5	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	5	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.9		55 - 158	106%	SPK: 50
1868-53-7	Dibromofluoromethane	56.8		53 - 156	114%	SPK: 50
2037-26-5	Toluene-d8	50.1		85 - 115	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	40.7	*	85 - 120	81%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	109946	4.38			
540-36-3	1,4-Difluorobenzene	175929	5.12			
3114-55-4	Chlorobenzene-d5	157625	9.31			
3855-82-1	1,4-Dichlorobenzene-d4	67929	12.23			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
000493-02-7	Naphthalene, decahydro-, trans-	5.2	J		12.29	ug/Kg

**Report of Analysis**

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/09/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-721	SDG No.:	D1473
Lab Sample ID:	D1473-05	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.99      Units:    g	Final Vol:	5000              uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624      ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031207.D	1		02/13/12	VF021312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/09/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-721RE	SDG No.:	D1473
Lab Sample ID:	D1473-05RE	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID: 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031221.D	1		02/14/12	VF021412

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.45	U	2.45	4.9	ug/Kg
74-87-3	Chloromethane	2.45	U	2.45	4.9	ug/Kg
75-01-4	Vinyl Chloride	2.45	U	2.45	4.9	ug/Kg
74-83-9	Bromomethane	2.45	U	2.45	4.9	ug/Kg
75-00-3	Chloroethane	2.45	U	2.45	4.9	ug/Kg
75-69-4	Trichlorofluoromethane	2.45	U	2.45	4.9	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.45	U	2.45	4.9	ug/Kg
75-35-4	1,1-Dichloroethene	2.45	U	2.45	4.9	ug/Kg
67-64-1	Acetone	17	J	12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.45	U	2.45	4.9	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.45	U	2.45	4.9	ug/Kg
79-20-9	Methyl Acetate	2.45	U	2.45	4.9	ug/Kg
75-09-2	Methylene Chloride	2.45	U	2.45	4.9	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.45	U	2.45	4.9	ug/Kg
75-34-3	1,1-Dichloroethane	2.45	U	2.45	4.9	ug/Kg
110-82-7	Cyclohexane	2.45	U	2.45	4.9	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.45	U	2.45	4.9	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.45	U	2.45	4.9	ug/Kg
67-66-3	Chloroform	2.45	U	2.45	4.9	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.45	U	2.45	4.9	ug/Kg
108-87-2	Methylcyclohexane	2.45	U	2.45	4.9	ug/Kg
71-43-2	Benzene	2.45	U	2.45	4.9	ug/Kg
107-06-2	1,2-Dichloroethane	2.45	U	2.45	4.9	ug/Kg
79-01-6	Trichloroethene	2.45	U	2.45	4.9	ug/Kg
78-87-5	1,2-Dichloropropane	2.45	U	2.45	4.9	ug/Kg
75-27-4	Bromodichloromethane	2.45	U	2.45	4.9	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.45	U	2.45	4.9	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.45	U	2.45	4.9	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.45	U	2.45	4.9	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/09/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-721RE	SDG No.:	D1473
Lab Sample ID:	D1473-05RE	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031221.D	1		02/14/12	VF021412

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.45	U	2.45	4.9	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.45	U	2.45	4.9	ug/Kg
106-93-4	1,2-Dibromoethane	2.45	U	2.45	4.9	ug/Kg
127-18-4	Tetrachloroethene	2.45	U	2.45	4.9	ug/Kg
108-90-7	Chlorobenzene	2.45	U	2.45	4.9	ug/Kg
100-41-4	Ethyl Benzene	2.45	U	2.45	4.9	ug/Kg
179601-23-1	m/p-Xylenes	4.95	U	4.95	9.9	ug/Kg
95-47-6	o-Xylene	2.45	U	2.45	4.9	ug/Kg
100-42-5	Styrene	2.45	U	2.45	4.9	ug/Kg
75-25-2	Bromoform	2.45	U	2.45	4.9	ug/Kg
98-82-8	Isopropylbenzene	2.45	U	2.45	4.9	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.45	U	2.45	4.9	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.45	U	2.45	4.9	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.45	U	2.45	4.9	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	41.4		55 - 158	83%	SPK: 50
1868-53-7	Dibromofluoromethane	46.3		53 - 156	93%	SPK: 50
2037-26-5	Toluene-d8	44		85 - 115	88%	SPK: 50
460-00-4	4-Bromofluorobenzene	37.1	*	85 - 120	74%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	117302	4.37			
540-36-3	1,4-Difluorobenzene	179798	5.12			
3114-55-4	Chlorobenzene-d5	159477	9.31			
3855-82-1	1,4-Dichlorobenzene-d4	74840	12.23			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/09/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-741	SDG No.:	D1473
Lab Sample ID:	D1473-06	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.97 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031208.D	1		02/13/12	VF021312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.5	U	2.5	5	ug/Kg
74-87-3	Chloromethane	2.5	U	2.5	5	ug/Kg
75-01-4	Vinyl Chloride	2.5	U	2.5	5	ug/Kg
74-83-9	Bromomethane	2.5	U	2.5	5	ug/Kg
75-00-3	Chloroethane	2.5	U	2.5	5	ug/Kg
75-69-4	Trichlorofluoromethane	2.5	U	2.5	5	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.5	5	ug/Kg
75-35-4	1,1-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-64-1	Acetone	21	J	12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.5	U	2.5	5	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.5	U	2.5	5	ug/Kg
79-20-9	Methyl Acetate	2.5	U	2.5	5	ug/Kg
75-09-2	Methylene Chloride	2.5	U	2.5	5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
75-34-3	1,1-Dichloroethane	2.5	U	2.5	5	ug/Kg
110-82-7	Cyclohexane	2.5	U	2.5	5	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.5	U	2.5	5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-66-3	Chloroform	2.5	U	2.5	5	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	5	ug/Kg
108-87-2	Methylcyclohexane	2.5	U	2.5	5	ug/Kg
71-43-2	Benzene	2.5	U	2.5	5	ug/Kg
107-06-2	1,2-Dichloroethane	2.5	U	2.5	5	ug/Kg
79-01-6	Trichloroethene	2.5	U	2.5	5	ug/Kg
78-87-5	1,2-Dichloropropane	2.5	U	2.5	5	ug/Kg
75-27-4	Bromodichloromethane	2.5	U	2.5	5	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.5	U	2.5	5	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/09/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-741	SDG No.:	D1473
Lab Sample ID:	D1473-06	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.97 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031208.D	1		02/13/12	VF021312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	5	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.5	U	2.5	5	ug/Kg
106-93-4	1,2-Dibromoethane	2.5	U	2.5	5	ug/Kg
127-18-4	Tetrachloroethene	2.5	U	2.5	5	ug/Kg
108-90-7	Chlorobenzene	2.5	U	2.5	5	ug/Kg
100-41-4	Ethyl Benzene	2.5	U	2.5	5	ug/Kg
179601-23-1	m/p-Xylenes	5	U	5	10	ug/Kg
95-47-6	o-Xylene	2.5	U	2.5	5	ug/Kg
100-42-5	Styrene	2.5	U	2.5	5	ug/Kg
75-25-2	Bromoform	2.5	U	2.5	5	ug/Kg
98-82-8	Isopropylbenzene	2.5	U	2.5	5	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	5	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.5	5	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	5	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.3		55 - 158	105%	SPK: 50
1868-53-7	Dibromofluoromethane	54.9		53 - 156	110%	SPK: 50
2037-26-5	Toluene-d8	49		85 - 115	98%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.9	*	85 - 120	80%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	107547	4.38			
540-36-3	1,4-Difluorobenzene	170492	5.12			
3114-55-4	Chlorobenzene-d5	151158	9.31			
3855-82-1	1,4-Dichlorobenzene-d4	62329	12.23			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
1000280-07-0	Pentafluoropropionic acid, decyl e	5.1	J		11.34	ug/Kg
000493-02-7	Naphthalene, decahydro-, trans-	6.4	J		12.29	ug/Kg



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/09/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-741RE	SDG No.:	D1473
Lab Sample ID:	D1473-06RE	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.94 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031222.D	1		02/14/12	VF021412

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.55	U	2.55	5.1	ug/Kg
74-87-3	Chloromethane	2.55	U	2.55	5.1	ug/Kg
75-01-4	Vinyl Chloride	2.55	U	2.55	5.1	ug/Kg
74-83-9	Bromomethane	2.55	U	2.55	5.1	ug/Kg
75-00-3	Chloroethane	2.55	U	2.55	5.1	ug/Kg
75-69-4	Trichlorofluoromethane	2.55	U	2.55	5.1	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.55	U	2.55	5.1	ug/Kg
75-35-4	1,1-Dichloroethene	2.55	U	2.55	5.1	ug/Kg
67-64-1	Acetone	25	J	12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.55	U	2.55	5.1	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.55	U	2.55	5.1	ug/Kg
79-20-9	Methyl Acetate	2.55	U	2.55	5.1	ug/Kg
75-09-2	Methylene Chloride	2.55	U	2.55	5.1	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.55	U	2.55	5.1	ug/Kg
75-34-3	1,1-Dichloroethane	2.55	U	2.55	5.1	ug/Kg
110-82-7	Cyclohexane	2.55	U	2.55	5.1	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.55	U	2.55	5.1	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.55	U	2.55	5.1	ug/Kg
67-66-3	Chloroform	2.55	U	2.55	5.1	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.55	U	2.55	5.1	ug/Kg
108-87-2	Methylcyclohexane	2.55	U	2.55	5.1	ug/Kg
71-43-2	Benzene	2.55	U	2.55	5.1	ug/Kg
107-06-2	1,2-Dichloroethane	2.55	U	2.55	5.1	ug/Kg
79-01-6	Trichloroethene	2.55	U	2.55	5.1	ug/Kg
78-87-5	1,2-Dichloropropane	2.55	U	2.55	5.1	ug/Kg
75-27-4	Bromodichloromethane	2.55	U	2.55	5.1	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.55	U	2.55	5.1	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.55	U	2.55	5.1	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.55	U	2.55	5.1	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/09/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB132-GW-741RE	SDG No.:	D1473
Lab Sample ID:	D1473-06RE	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.94 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031222.D	1		02/14/12	VF021412

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.55	U	2.55	5.1	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.55	U	2.55	5.1	ug/Kg
106-93-4	1,2-Dibromoethane	2.55	U	2.55	5.1	ug/Kg
127-18-4	Tetrachloroethene	2.55	U	2.55	5.1	ug/Kg
108-90-7	Chlorobenzene	2.55	U	2.55	5.1	ug/Kg
100-41-4	Ethyl Benzene	2.55	U	2.55	5.1	ug/Kg
179601-23-1	m/p-Xylenes	5	U	5	10	ug/Kg
95-47-6	o-Xylene	2.55	U	2.55	5.1	ug/Kg
100-42-5	Styrene	2.55	U	2.55	5.1	ug/Kg
75-25-2	Bromoform	2.55	U	2.55	5.1	ug/Kg
98-82-8	Isopropylbenzene	2.55	U	2.55	5.1	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.55	U	2.55	5.1	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.55	U	2.55	5.1	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.55	U	2.55	5.1	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.55	U	2.55	5.1	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.55	U	2.55	5.1	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.55	U	2.55	5.1	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	41.8		55 - 158	84%	SPK: 50
1868-53-7	Dibromofluoromethane	47.4		53 - 156	95%	SPK: 50
2037-26-5	Toluene-d8	43.8		85 - 115	88%	SPK: 50
460-00-4	4-Bromofluorobenzene	37.9	*	85 - 120	76%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	109035	4.36			
540-36-3	1,4-Difluorobenzene	167609	5.11			
3114-55-4	Chlorobenzene-d5	153343	9.31			
3855-82-1	1,4-Dichlorobenzene-d4	71888	12.23			







## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/13/12
Project:	Bethpage CTO-066	Date Received:	02/15/12
Client Sample ID:	BP-VPB132-GW-761	SDG No.:	D1516
Lab Sample ID:	D1516-02	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.06 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031240.D	1		02/15/12	VF021512

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.45	U	2.45	4.9	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.45	U	2.45	4.9	ug/Kg
106-93-4	1,2-Dibromoethane	2.45	U	2.45	4.9	ug/Kg
127-18-4	Tetrachloroethene	2.45	U	2.45	4.9	ug/Kg
108-90-7	Chlorobenzene	2.45	U	2.45	4.9	ug/Kg
100-41-4	Ethyl Benzene	2.45	U	2.45	4.9	ug/Kg
179601-23-1	m/p-Xylenes	4.95	U	4.95	9.9	ug/Kg
95-47-6	o-Xylene	2.45	U	2.45	4.9	ug/Kg
100-42-5	Styrene	2.45	U	2.45	4.9	ug/Kg
75-25-2	Bromoform	2.45	U	2.45	4.9	ug/Kg
98-82-8	Isopropylbenzene	2.45	U	2.45	4.9	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.45	U	2.45	4.9	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.45	U	2.45	4.9	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.45	U	2.45	4.9	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	46.8		55 - 158	94%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		53 - 156	96%	SPK: 50
2037-26-5	Toluene-d8	44.8		85 - 115	90%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.1		85 - 120	90%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	105472	4.37			
540-36-3	1,4-Difluorobenzene	163573	5.11			
3114-55-4	Chlorobenzene-d5	167789	9.31			
3855-82-1	1,4-Dichlorobenzene-d4	94961	12.23			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/13/12
Project:	Bethpage CTO-066	Date Received:	02/15/12
Client Sample ID:	BP-VPB132-GW-781	SDG No.:	D1516
Lab Sample ID:	D1516-03	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.06 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031241.D	1		02/15/12	VF021512

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.45	U	2.45	4.9	ug/Kg
74-87-3	Chloromethane	2.45	U	2.45	4.9	ug/Kg
75-01-4	Vinyl Chloride	2.45	U	2.45	4.9	ug/Kg
74-83-9	Bromomethane	2.45	U	2.45	4.9	ug/Kg
75-00-3	Chloroethane	2.45	U	2.45	4.9	ug/Kg
75-69-4	Trichlorofluoromethane	2.45	U	2.45	4.9	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.45	U	2.45	4.9	ug/Kg
75-35-4	1,1-Dichloroethene	2.45	U	2.45	4.9	ug/Kg
67-64-1	Acetone	20	J	12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.45	U	2.45	4.9	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.45	U	2.45	4.9	ug/Kg
79-20-9	Methyl Acetate	2.45	U	2.45	4.9	ug/Kg
75-09-2	Methylene Chloride	2.45	U	2.45	4.9	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.45	U	2.45	4.9	ug/Kg
75-34-3	1,1-Dichloroethane	2.45	U	2.45	4.9	ug/Kg
110-82-7	Cyclohexane	2.45	U	2.45	4.9	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.45	U	2.45	4.9	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.45	U	2.45	4.9	ug/Kg
67-66-3	Chloroform	2.45	U	2.45	4.9	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.45	U	2.45	4.9	ug/Kg
108-87-2	Methylcyclohexane	2.45	U	2.45	4.9	ug/Kg
71-43-2	Benzene	2.45	U	2.45	4.9	ug/Kg
107-06-2	1,2-Dichloroethane	2.45	U	2.45	4.9	ug/Kg
79-01-6	Trichloroethene	2.45	U	2.45	4.9	ug/Kg
78-87-5	1,2-Dichloropropane	2.45	U	2.45	4.9	ug/Kg
75-27-4	Bromodichloromethane	2.45	U	2.45	4.9	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.45	U	2.45	4.9	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.45	U	2.45	4.9	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.45	U	2.45	4.9	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/13/12
Project:	Bethpage CTO-066	Date Received:	02/15/12
Client Sample ID:	BP-VPB132-GW-781	SDG No.:	D1516
Lab Sample ID:	D1516-03	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.06 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031241.D	1		02/15/12	VF021512

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.45	U	2.45	4.9	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.45	U	2.45	4.9	ug/Kg
106-93-4	1,2-Dibromoethane	2.45	U	2.45	4.9	ug/Kg
127-18-4	Tetrachloroethene	2.45	U	2.45	4.9	ug/Kg
108-90-7	Chlorobenzene	2.45	U	2.45	4.9	ug/Kg
100-41-4	Ethyl Benzene	2.45	U	2.45	4.9	ug/Kg
179601-23-1	m/p-Xylenes	4.95	U	4.95	9.9	ug/Kg
95-47-6	o-Xylene	2.45	U	2.45	4.9	ug/Kg
100-42-5	Styrene	2.45	U	2.45	4.9	ug/Kg
75-25-2	Bromoform	2.45	U	2.45	4.9	ug/Kg
98-82-8	Isopropylbenzene	2.45	U	2.45	4.9	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.45	U	2.45	4.9	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.45	U	2.45	4.9	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.45	U	2.45	4.9	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	43.7		55 - 158	87%	SPK: 50
1868-53-7	Dibromofluoromethane	48.1		53 - 156	96%	SPK: 50
2037-26-5	Toluene-d8	44.6		85 - 115	89%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.4		85 - 120	85%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	106521	4.37			
540-36-3	1,4-Difluorobenzene	164619	5.12			
3114-55-4	Chlorobenzene-d5	159391	9.31			
3855-82-1	1,4-Dichlorobenzene-d4	81586	12.23			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
000124-18-5	Decane	5.0	J		11.33	ug/Kg



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/14/12
Project:	Bethpage CTO-066	Date Received:	02/15/12
Client Sample ID:	BP-VPB132-GW-821	SDG No.:	D1516
Lab Sample ID:	D1516-04	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.05 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031242.D	1		02/15/12	VF021512

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.5	U	2.5	5	ug/Kg
74-87-3	Chloromethane	2.5	U	2.5	5	ug/Kg
75-01-4	Vinyl Chloride	2.5	U	2.5	5	ug/Kg
74-83-9	Bromomethane	2.5	U	2.5	5	ug/Kg
75-00-3	Chloroethane	2.5	U	2.5	5	ug/Kg
75-69-4	Trichlorofluoromethane	2.5	U	2.5	5	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.5	5	ug/Kg
75-35-4	1,1-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-64-1	Acetone	15	J	12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.5	U	2.5	5	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.5	U	2.5	5	ug/Kg
79-20-9	Methyl Acetate	2.5	U	2.5	5	ug/Kg
75-09-2	Methylene Chloride	2.5	U	2.5	5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
75-34-3	1,1-Dichloroethane	2.5	U	2.5	5	ug/Kg
110-82-7	Cyclohexane	2.5	U	2.5	5	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.5	U	2.5	5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-66-3	Chloroform	2.5	U	2.5	5	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	5	ug/Kg
108-87-2	Methylcyclohexane	2.5	U	2.5	5	ug/Kg
71-43-2	Benzene	2.5	U	2.5	5	ug/Kg
107-06-2	1,2-Dichloroethane	2.5	U	2.5	5	ug/Kg
79-01-6	Trichloroethene	2.5	U	2.5	5	ug/Kg
78-87-5	1,2-Dichloropropane	2.5	U	2.5	5	ug/Kg
75-27-4	Bromodichloromethane	2.5	U	2.5	5	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.5	U	2.5	5	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/14/12
Project:	Bethpage CTO-066	Date Received:	02/15/12
Client Sample ID:	BP-VPB132-GW-821	SDG No.:	D1516
Lab Sample ID:	D1516-04	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.05      Units:    g	Final Vol:	5000              uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624      ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031242.D	1		02/15/12	VF021512

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	5	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.5	U	2.5	5	ug/Kg
106-93-4	1,2-Dibromoethane	2.5	U	2.5	5	ug/Kg
127-18-4	Tetrachloroethene	2.5	U	2.5	5	ug/Kg
108-90-7	Chlorobenzene	2.5	U	2.5	5	ug/Kg
100-41-4	Ethyl Benzene	2.5	U	2.5	5	ug/Kg
179601-23-1	m/p-Xylenes	4.95	U	4.95	9.9	ug/Kg
95-47-6	o-Xylene	2.5	U	2.5	5	ug/Kg
100-42-5	Styrene	2.5	U	2.5	5	ug/Kg
75-25-2	Bromoform	2.5	U	2.5	5	ug/Kg
98-82-8	Isopropylbenzene	2.5	U	2.5	5	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	5	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.5	5	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	5	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	42.8		55 - 158	86%	SPK: 50
1868-53-7	Dibromofluoromethane	46.5		53 - 156	93%	SPK: 50
2037-26-5	Toluene-d8	43.7		85 - 115	87%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.6		85 - 120	87%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	108314	4.36			
540-36-3	1,4-Difluorobenzene	169339	5.11			
3114-55-4	Chlorobenzene-d5	157287	9.31			
3855-82-1	1,4-Dichlorobenzene-d4	82176	12.22			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
007058-05-1	Cyclohexane, 1-ethyl-2,3-dimethyl-	5.1	J		10.89	ug/Kg
000124-18-5	Decane	8.8	J		11.34	ug/Kg
002847-72-5	Decane, 4-methyl-	6.7	J		11.68	ug/Kg



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/14/12
Project:	Bethpage CTO-066	Date Received:	02/15/12
Client Sample ID:	BP-VPB132-GW-841	SDG No.:	D1516
Lab Sample ID:	D1516-05	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.03 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031255.D	1		02/16/12	VF021612

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.5	U	2.5	5	ug/Kg
74-87-3	Chloromethane	2.5	U	2.5	5	ug/Kg
75-01-4	Vinyl Chloride	2.5	U	2.5	5	ug/Kg
74-83-9	Bromomethane	2.5	U	2.5	5	ug/Kg
75-00-3	Chloroethane	2.5	U	2.5	5	ug/Kg
75-69-4	Trichlorofluoromethane	2.5	U	2.5	5	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.5	5	ug/Kg
75-35-4	1,1-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-64-1	Acetone	28		12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.5	U	2.5	5	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.5	U	2.5	5	ug/Kg
79-20-9	Methyl Acetate	2.5	U	2.5	5	ug/Kg
75-09-2	Methylene Chloride	5.1	Q	2.5	5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
75-34-3	1,1-Dichloroethane	2.5	U	2.5	5	ug/Kg
110-82-7	Cyclohexane	2.5	U	2.5	5	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.5	U	2.5	5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-66-3	Chloroform	2.5	U	2.5	5	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	5	ug/Kg
108-87-2	Methylcyclohexane	2.5	U	2.5	5	ug/Kg
71-43-2	Benzene	2.5	U	2.5	5	ug/Kg
107-06-2	1,2-Dichloroethane	2.5	U	2.5	5	ug/Kg
79-01-6	Trichloroethene	2.5	U	2.5	5	ug/Kg
78-87-5	1,2-Dichloropropane	2.5	U	2.5	5	ug/Kg
75-27-4	Bromodichloromethane	2.5	U	2.5	5	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.5	U	2.5	5	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/14/12
Project:	Bethpage CTO-066	Date Received:	02/15/12
Client Sample ID:	BP-VPB132-GW-841	SDG No.:	D1516
Lab Sample ID:	D1516-05	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.03 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031255.D	1		02/16/12	VF021612

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	5	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.5	U	2.5	5	ug/Kg
106-93-4	1,2-Dibromoethane	2.5	U	2.5	5	ug/Kg
127-18-4	Tetrachloroethene	2.5	U	2.5	5	ug/Kg
108-90-7	Chlorobenzene	2.5	U	2.5	5	ug/Kg
100-41-4	Ethyl Benzene	2.5	U	2.5	5	ug/Kg
179601-23-1	m/p-Xylenes	4.95	U	4.95	9.9	ug/Kg
95-47-6	o-Xylene	2.5	U	2.5	5	ug/Kg
100-42-5	Styrene	2.5	U	2.5	5	ug/Kg
75-25-2	Bromoform	2.5	U	2.5	5	ug/Kg
98-82-8	Isopropylbenzene	2.5	U	2.5	5	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	5	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.5	5	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	5	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	47.3		55 - 158	95%	SPK: 50
1868-53-7	Dibromofluoromethane	46.7		53 - 156	93%	SPK: 50
2037-26-5	Toluene-d8	45		85 - 115	90%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.4		85 - 120	85%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	100026	4.38			
540-36-3	1,4-Difluorobenzene	166525	5.12			
3114-55-4	Chlorobenzene-d5	163219	9.31			
3855-82-1	1,4-Dichlorobenzene-d4	83946	12.23			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
001678-92-8	Cyclohexane, propyl-	6.4	J		10.26	ug/Kg
062960-76-3	4-Octene, 2,6-dimethyl-, [S-(E)]-	6.5	J		10.9	ug/Kg
000489-20-3	Cyclopentane, 1,2-dimethyl-3-(1-me	7.2	J		11.22	ug/Kg

**Report of Analysis**

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/14/12
Project:	Bethpage CTO-066	Date Received:	02/15/12
Client Sample ID:	BP-VPB132-GW-841	SDG No.:	D1516
Lab Sample ID:	D1516-05	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.03      Units:    g	Final Vol:	5000              uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624      ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031255.D	1		02/16/12	VF021612

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
000124-18-5	Decane	8.4	J		11.34	ug/Kg
004110-44-5	Octane, 3,3-dimethyl-	6.3	J		11.69	ug/Kg
000493-02-7	Naphthalene, decahydro-, trans-	9.0	J		12.29	ug/Kg
002958-76-1	Naphthalene, decahydro-2-methyl-	6.5	J		12.89	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/15/12
Project:	Bethpage CTO-066	Date Received:	02/17/12
Client Sample ID:	BP-VPB132-GW-861	SDG No.:	d1547
Lab Sample ID:	D1547-04	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031267.D	1		02/17/12	VF021712

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.5	U	2.5	5	ug/Kg
74-87-3	Chloromethane	2.5	U	2.5	5	ug/Kg
75-01-4	Vinyl Chloride	2.5	U	2.5	5	ug/Kg
74-83-9	Bromomethane	2.5	U	2.5	5	ug/Kg
75-00-3	Chloroethane	2.5	U	2.5	5	ug/Kg
75-69-4	Trichlorofluoromethane	2.5	U	2.5	5	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.5	5	ug/Kg
75-35-4	1,1-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-64-1	Acetone	37		12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.5	U	2.5	5	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.5	U	2.5	5	ug/Kg
79-20-9	Methyl Acetate	2.5	U	2.5	5	ug/Kg
75-09-2	Methylene Chloride	2.5	U	2.5	5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
75-34-3	1,1-Dichloroethane	2.5	U	2.5	5	ug/Kg
110-82-7	Cyclohexane	2.5	U	2.5	5	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.5	U	2.5	5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-66-3	Chloroform	2.5	U	2.5	5	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	5	ug/Kg
108-87-2	Methylcyclohexane	2.5	U	2.5	5	ug/Kg
71-43-2	Benzene	2.5	U	2.5	5	ug/Kg
107-06-2	1,2-Dichloroethane	2.5	U	2.5	5	ug/Kg
79-01-6	Trichloroethene	2.5	U	2.5	5	ug/Kg
78-87-5	1,2-Dichloropropane	2.5	U	2.5	5	ug/Kg
75-27-4	Bromodichloromethane	2.5	U	2.5	5	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.5	U	2.5	5	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/15/12
Project:	Bethpage CTO-066	Date Received:	02/17/12
Client Sample ID:	BP-VPB132-GW-861	SDG No.:	d1547
Lab Sample ID:	D1547-04	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031267.D	1		02/17/12	VF021712

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	5	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.5	U	2.5	5	ug/Kg
106-93-4	1,2-Dibromoethane	2.5	U	2.5	5	ug/Kg
127-18-4	Tetrachloroethene	2.5	U	2.5	5	ug/Kg
108-90-7	Chlorobenzene	2.5	U	2.5	5	ug/Kg
100-41-4	Ethyl Benzene	2.5	U	2.5	5	ug/Kg
179601-23-1	m/p-Xylenes	5	U	5	10	ug/Kg
95-47-6	o-Xylene	2.5	U	2.5	5	ug/Kg
100-42-5	Styrene	2.5	U	2.5	5	ug/Kg
75-25-2	Bromoform	2.5	U	2.5	5	ug/Kg
98-82-8	Isopropylbenzene	2.5	U	2.5	5	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	5	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.5	5	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	5	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	45.8		55 - 158	92%	SPK: 50
1868-53-7	Dibromofluoromethane	50.7		53 - 156	101%	SPK: 50
2037-26-5	Toluene-d8	47.1		85 - 115	94%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.4		85 - 120	91%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	89034	4.38			
540-36-3	1,4-Difluorobenzene	142537	5.12			
3114-55-4	Chlorobenzene-d5	141961	9.32			
3855-82-1	1,4-Dichlorobenzene-d4	74833	12.23			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
	unknown 10.26	7.3	J		10.26	ug/Kg
003404-77-1	1-Hexene, 3,3-dimethyl-	7.7	J		10.9	ug/Kg
004291-80-9	Cyclohexane, 1-methyl-3-propyl-	8.2	J		11.22	ug/Kg





## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/21/12
Project:	Bethpage CTO-066	Date Received:	02/23/12
Client Sample ID:	BP-VPB132-GW-942	SDG No.:	D1593
Lab Sample ID:	D1593-02	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.97 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031368.D	1		02/23/12	VF022312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.5	U	2.5	5	ug/Kg
74-87-3	Chloromethane	2.5	U	2.5	5	ug/Kg
75-01-4	Vinyl Chloride	2.5	U	2.5	5	ug/Kg
74-83-9	Bromomethane	2.5	U	2.5	5	ug/Kg
75-00-3	Chloroethane	2.5	U	2.5	5	ug/Kg
75-69-4	Trichlorofluoromethane	2.5	U	2.5	5	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.5	U	2.5	5	ug/Kg
75-35-4	1,1-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-64-1	Acetone	19	J	12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.5	U	2.5	5	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.5	U	2.5	5	ug/Kg
79-20-9	Methyl Acetate	2.5	U	2.5	5	ug/Kg
75-09-2	Methylene Chloride	2.5	U	2.5	5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
75-34-3	1,1-Dichloroethane	2.5	U	2.5	5	ug/Kg
110-82-7	Cyclohexane	2.5	U	2.5	5	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.5	U	2.5	5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.5	U	2.5	5	ug/Kg
67-66-3	Chloroform	2.5	U	2.5	5	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	5	ug/Kg
108-87-2	Methylcyclohexane	2.5	U	2.5	5	ug/Kg
71-43-2	Benzene	2.5	U	2.5	5	ug/Kg
107-06-2	1,2-Dichloroethane	2.5	U	2.5	5	ug/Kg
79-01-6	Trichloroethene	2.5	U	2.5	5	ug/Kg
78-87-5	1,2-Dichloropropane	2.5	U	2.5	5	ug/Kg
75-27-4	Bromodichloromethane	2.5	U	2.5	5	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.5	U	2.5	5	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	5	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/21/12
Project:	Bethpage CTO-066	Date Received:	02/23/12
Client Sample ID:	BP-VPB132-GW-942	SDG No.:	D1593
Lab Sample ID:	D1593-02	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	4.97 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031368.D	1		02/23/12	VF022312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	5	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.5	U	2.5	5	ug/Kg
106-93-4	1,2-Dibromoethane	2.5	U	2.5	5	ug/Kg
127-18-4	Tetrachloroethene	2.5	U	2.5	5	ug/Kg
108-90-7	Chlorobenzene	2.5	U	2.5	5	ug/Kg
100-41-4	Ethyl Benzene	2.5	U	2.5	5	ug/Kg
179601-23-1	m/p-Xylenes	5	U	5	10	ug/Kg
95-47-6	o-Xylene	2.5	U	2.5	5	ug/Kg
100-42-5	Styrene	2.5	U	2.5	5	ug/Kg
75-25-2	Bromoform	2.5	U	2.5	5	ug/Kg
98-82-8	Isopropylbenzene	2.5	U	2.5	5	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	5	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	5	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U	2.5	5	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	5	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	46		55 - 158	92%	SPK: 50
1868-53-7	Dibromofluoromethane	48.8		53 - 156	98%	SPK: 50
2037-26-5	Toluene-d8	46.3		85 - 115	93%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.4		85 - 120	87%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	75835	4.37			
540-36-3	1,4-Difluorobenzene	113353	5.12			
3114-55-4	Chlorobenzene-d5	107258	9.32			
3855-82-1	1,4-Dichlorobenzene-d4	55570	12.23			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
60-29-7	Diethyl Ether	12	J		1.45	ug/Kg
000589-34-4	Hexane, 3-methyl-	7.6	J		3.55	ug/Kg
	unknown10.26	6.6	J		10.26	ug/Kg



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/15/12
Project:	Bethpage CTO-066	Date Received:	02/17/12
Client Sample ID:	BP-VPB132-SW-021512	SDG No.:	d1547
Lab Sample ID:	D1547-02	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003730.D	1		02/17/12	VR021712

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.6	J	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.41	J	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.98	J	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L





## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/15/12
Project:	Bethpage CTO-066	Date Received:	02/17/12
Client Sample ID:	BP-VPB132-DM-850	SDG No.:	d1547
Lab Sample ID:	D1547-03	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031266.D	1		02/17/12	VF021712

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	2.45	U	2.45	4.9	ug/Kg
74-87-3	Chloromethane	2.45	U	2.45	4.9	ug/Kg
75-01-4	Vinyl Chloride	2.45	U	2.45	4.9	ug/Kg
74-83-9	Bromomethane	2.45	U	2.45	4.9	ug/Kg
75-00-3	Chloroethane	2.45	U	2.45	4.9	ug/Kg
75-69-4	Trichlorofluoromethane	2.45	U	2.45	4.9	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	2.45	U	2.45	4.9	ug/Kg
75-35-4	1,1-Dichloroethene	2.45	U	2.45	4.9	ug/Kg
67-64-1	Acetone	29		12.5	25	ug/Kg
75-15-0	Carbon Disulfide	2.45	U	2.45	4.9	ug/Kg
1634-04-4	Methyl tert-butyl Ether	2.45	U	2.45	4.9	ug/Kg
79-20-9	Methyl Acetate	2.45	U	2.45	4.9	ug/Kg
75-09-2	Methylene Chloride	2.45	U	2.45	4.9	ug/Kg
156-60-5	trans-1,2-Dichloroethene	2.45	U	2.45	4.9	ug/Kg
75-34-3	1,1-Dichloroethane	2.45	U	2.45	4.9	ug/Kg
110-82-7	Cyclohexane	2.45	U	2.45	4.9	ug/Kg
78-93-3	2-Butanone	12.5	U	12.5	25	ug/Kg
56-23-5	Carbon Tetrachloride	2.45	U	2.45	4.9	ug/Kg
156-59-2	cis-1,2-Dichloroethene	2.45	U	2.45	4.9	ug/Kg
67-66-3	Chloroform	2.45	U	2.45	4.9	ug/Kg
71-55-6	1,1,1-Trichloroethane	2.45	U	2.45	4.9	ug/Kg
108-87-2	Methylcyclohexane	2.45	U	2.45	4.9	ug/Kg
71-43-2	Benzene	2.45	U	2.45	4.9	ug/Kg
107-06-2	1,2-Dichloroethane	2.45	U	2.45	4.9	ug/Kg
79-01-6	Trichloroethene	2.45	U	2.45	4.9	ug/Kg
78-87-5	1,2-Dichloropropane	2.45	U	2.45	4.9	ug/Kg
75-27-4	Bromodichloromethane	2.45	U	2.45	4.9	ug/Kg
108-10-1	4-Methyl-2-Pentanone	12.5	U	12.5	25	ug/Kg
108-88-3	Toluene	2.45	U	2.45	4.9	ug/Kg
10061-02-6	t-1,3-Dichloropropene	2.45	U	2.45	4.9	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	2.45	U	2.45	4.9	ug/Kg

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/15/12
Project:	Bethpage CTO-066	Date Received:	02/17/12
Client Sample ID:	BP-VPB132-DM-850	SDG No.:	d1547
Lab Sample ID:	D1547-03	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF031266.D	1		02/17/12	VF021712

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	2.45	U	2.45	4.9	ug/Kg
591-78-6	2-Hexanone	12.5	U	12.5	25	ug/Kg
124-48-1	Dibromochloromethane	2.45	U	2.45	4.9	ug/Kg
106-93-4	1,2-Dibromoethane	2.45	U	2.45	4.9	ug/Kg
127-18-4	Tetrachloroethene	2.45	U	2.45	4.9	ug/Kg
108-90-7	Chlorobenzene	2.45	U	2.45	4.9	ug/Kg
100-41-4	Ethyl Benzene	2.45	U	2.45	4.9	ug/Kg
179601-23-1	m/p-Xylenes	4.95	U	4.95	9.9	ug/Kg
95-47-6	o-Xylene	2.45	U	2.45	4.9	ug/Kg
100-42-5	Styrene	2.45	U	2.45	4.9	ug/Kg
75-25-2	Bromoform	2.45	U	2.45	4.9	ug/Kg
98-82-8	Isopropylbenzene	2.45	U	2.45	4.9	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	2.45	U	2.45	4.9	ug/Kg
541-73-1	1,3-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
106-46-7	1,4-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
95-50-1	1,2-Dichlorobenzene	2.45	U	2.45	4.9	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	2.45	U	2.45	4.9	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	2.45	U	2.45	4.9	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	48.4		55 - 158	97%	SPK: 50
1868-53-7	Dibromofluoromethane	49.1		53 - 156	98%	SPK: 50
2037-26-5	Toluene-d8	44.1		85 - 115	88%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.3		85 - 120	93%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	90991	4.37			
540-36-3	1,4-Difluorobenzene	151271	5.12			
3114-55-4	Chlorobenzene-d5	150691	9.32			
3855-82-1	1,4-Dichlorobenzene-d4	79877	12.23			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
001678-97-3	Cyclohexane, 1,2,3-trimethyl-	8.2	J		10.26	ug/Kg
006783-92-2	Cyclohexane, 1,1,2,3-tetramethyl-	7.4	J		10.9	ug/Kg
004485-13-6	3-Heptene, 4-propyl-	8.1	J		11.21	ug/Kg







### Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/16/12
Project:	Bethpage CTO-066	Date Received:	02/17/12
Client Sample ID:	BP-VPB132-SB-891	SDG No.:	D1547
Lab Sample ID:	D1547-05	Matrix:	SOIL
		% Solid:	81.5

Parameter	Conc.	Qua.	DF	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	870		1	125	250	mg/Kg	02/21/12	02/21/12	9060

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 E = Value Exceeds Calibration Range  
 OR = Over Range

**Report of Analysis**

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/22/12
Project:	Bethpage CTO-066	Date Received:	02/23/12
Client Sample ID:	BP-VPB132-SB-971	SDG No.:	D1593
Lab Sample ID:	D1593-03	Matrix:	SOIL
		% Solid:	82.2

Parameter	Conc.	Qua.	DF	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TOC	20000	OR	1	150	300	mg/Kg	02/27/12	02/27/12	9060

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
E = Value Exceeds Calibration Range  
OR = Over Range





**Report of Analysis**

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/30/12
Project:	Bethpage CTO-066	Date Received:	02/03/12
Client Sample ID:	BP-VPB-TB-013012-SJC	SDG No.:	D1396
Lab Sample ID:	D1396-01	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040728.D	1		02/03/12	VG020312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L







## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/03/12
Project:	Bethpage CTO-066	Date Received:	02/08/12
Client Sample ID:	BP-VPB-TB-020312-SJC	SDG No.:	D1437
Lab Sample ID:	D1437-01	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003574.D	1		02/10/12	VR021012

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/03/12
Project:	Bethpage CTO-066	Date Received:	02/08/12
Client Sample ID:	BP-VPB-TB-020312-SJC	SDG No.:	D1437
Lab Sample ID:	D1437-01	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003574.D	1		02/10/12	VR021012

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	46.4		70 - 120	93%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	46.2		85 - 120	92%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.3		75 - 120	93%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1735140	7.58			
540-36-3	1,4-Difluorobenzene	2836470	8.5			
3114-55-4	Chlorobenzene-d5	2335830	11.31			
3855-82-1	1,4-Dichlorobenzene-d4	1405910	13.26			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/08/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB-TB-020812-SJC	SDG No.:	D1473
Lab Sample ID:	D1473-01	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003622.D	1		02/14/12	VR021412

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/08/12
Project:	Bethpage CTO-066	Date Received:	02/10/12
Client Sample ID:	BP-VPB-TB-020812-SJC	SDG No.:	D1473
Lab Sample ID:	D1473-01	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003622.D	1		02/14/12	VR021412

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	46.1		70 - 120	92%	SPK: 50
1868-53-7	Dibromofluoromethane	47.5		85 - 115	95%	SPK: 50
2037-26-5	Toluene-d8	45.6		85 - 120	91%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.5		75 - 120	91%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1587840	7.57			
540-36-3	1,4-Difluorobenzene	2612700	8.5			
3114-55-4	Chlorobenzene-d5	2129290	11.31			
3855-82-1	1,4-Dichlorobenzene-d4	1298120	13.26			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/13/12
Project:	Bethpage CTO-066	Date Received:	02/15/12
Client Sample ID:	BP-VPB-TB-021312	SDG No.:	D1516
Lab Sample ID:	D1516-01	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040875.D	1		02/16/12	VG021612

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	UQ	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/13/12
Project:	Bethpage CTO-066	Date Received:	02/15/12
Client Sample ID:	BP-VPB-TB-021312	SDG No.:	D1516
Lab Sample ID:	D1516-01	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG040875.D	1		02/16/12	VG021612

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	UQ	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	45.6		70 - 120	91%	SPK: 50
1868-53-7	Dibromofluoromethane	50		85 - 115	100%	SPK: 50
2037-26-5	Toluene-d8	48.3		85 - 120	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.5		75 - 120	99%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	834175	3.9			
540-36-3	1,4-Difluorobenzene	1311380	4.71			
3114-55-4	Chlorobenzene-d5	2064390	9.67			
3855-82-1	1,4-Dichlorobenzene-d4	956005	13.38			







## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/15/12
Project:	Bethpage CTO-066	Date Received:	02/17/12
Client Sample ID:	BP-VPB-TB-021512	SDG No.:	d1547
Lab Sample ID:	D1547-01	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003729.D	1		02/17/12	VR021712

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	46.8		70 - 120	94%	SPK: 50
1868-53-7	Dibromofluoromethane	48.2		85 - 115	96%	SPK: 50
2037-26-5	Toluene-d8	45.5		85 - 120	91%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.9		75 - 120	92%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1459330	7.58			
540-36-3	1,4-Difluorobenzene	2355430	8.5			
3114-55-4	Chlorobenzene-d5	1923310	11.32			
3855-82-1	1,4-Dichlorobenzene-d4	1174930	13.26			



## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/21/12
Project:	Bethpage CTO-066	Date Received:	02/23/12
Client Sample ID:	BP-VPB-TB-022112	SDG No.:	D1593
Lab Sample ID:	D1593-01	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003852.D	1		02/23/12	VR022312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.5	U	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.5	1	ug/L
67-64-1	Acetone	2.5	U	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.5	5	ug/L
108-88-3	Toluene	0.5	U	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.5	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.5	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	02/21/12
Project:	Bethpage CTO-066	Date Received:	02/23/12
Client Sample ID:	BP-VPB-TB-022112	SDG No.:	D1593
Lab Sample ID:	D1593-01	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR003852.D	1		02/23/12	VR022312

CAS Number	Parameter	Conc.	Qualifier	LOD	LOQ / CRQL	Units
79-00-5	1,1,2-Trichloroethane	0.5	U	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.5	1	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	47.1		70 - 120	94%	SPK: 50
1868-53-7	Dibromofluoromethane	48.2		85 - 115	97%	SPK: 50
2037-26-5	Toluene-d8	46.4		85 - 120	93%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.4		75 - 120	93%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	1076310	7.57			
540-36-3	1,4-Difluorobenzene	1646550	8.49			
3114-55-4	Chlorobenzene-d5	1475370	11.31			
3855-82-1	1,4-Dichlorobenzene-d4	873688	13.26			





Air Toxics

Client Sample ID: BP-VPB132-AIR-041812

Lab ID#: 1204433-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042612	Date of Collection:	4/19/12 12:30:00 PM
Dil. Factor:	1.42	Date of Analysis:	4/26/12 06:32 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.071	Not Detected U	0.39	Not Detected U
Carbon Tetrachloride	0.071	0.067 J	0.45	0.42 J
Trichloroethene	0.071	Not Detected U	0.38	Not Detected U
Bromodichloromethane	0.071	Not Detected U	0.48	Not Detected U
1,1,2-Trichloroethane	0.071	Not Detected U	0.39	Not Detected U
Tetrachloroethene	0.071	0.034 J	0.48	0.23 J
Dibromochloromethane	0.071	Not Detected U	0.60	Not Detected U
1,2-Dibromoethane (EDB)	0.071	Not Detected U	0.54	Not Detected U
1,1,2,2-Tetrachloroethane	0.071	Not Detected U	0.49	Not Detected U
1,3-Dichlorobenzene	0.071	Not Detected U	0.43	Not Detected U
1,4-Dichlorobenzene	0.071	Not Detected U	0.43	Not Detected U
1,2-Dichlorobenzene	0.071	Not Detected U	0.43	Not Detected U
Freon 12	0.071	0.59 J	0.35	2.9 J
Freon 114	0.071	Not Detected U	0.50	Not Detected U
Freon 11	0.071	0.21	0.40	1.2
Freon 113	0.071	0.058 J	0.54	0.44 J
Bromoform	0.071	Not Detected U	0.73	Not Detected U
Vinyl Chloride	0.14	Not Detected U	0.36	Not Detected U
1,1-Dichloroethene	0.14	Not Detected U	0.56	Not Detected U
1,1-Dichloroethane	0.14	Not Detected U	0.57	Not Detected U
cis-1,2-Dichloroethene	0.14	Not Detected U	0.56	Not Detected U
Benzene	0.14	0.34	0.45	1.1
1,2-Dichloroethane	0.14	0.021 J	0.57	0.086 J
Toluene	0.14	4.5	0.54	17
Ethyl Benzene	0.14	0.11 J	0.62	0.49 J
m,p-Xylene	0.14	0.33	0.62	1.4
o-Xylene	0.14	0.12 J	0.62	0.54 J
trans-1,2-Dichloroethene	0.14	Not Detected U	0.56	Not Detected U
Methyl tert-butyl ether	0.14	Not Detected U	0.51	Not Detected U
Chloromethane	0.14	0.35	0.29	0.71
Bromomethane	0.14	0.083 J	0.55	0.32 J
Chloroethane	0.71	Not Detected U	1.9	Not Detected U
Hexane	0.14	0.86	0.50	3.0
2-Butanone (Methyl Ethyl Ketone)	0.71	2.8	2.1	8.3
Chloroform	0.14	Not Detected U	0.69	Not Detected U
Cyclohexane	0.14	0.14 J	0.49	0.47 J
1,2-Dichloropropane	0.14	Not Detected U	0.66	Not Detected U
1,4-Dioxane	0.14	Not Detected U	0.51	Not Detected U
cis-1,3-Dichloropropene	0.14	Not Detected U	0.64	Not Detected U
4-Methyl-2-pentanone	0.14	0.83	0.58	3.4
trans-1,3-Dichloropropene	0.14	0.017 J	0.64	0.079 J
Chlorobenzene	0.14	Not Detected U	0.65	Not Detected U





Air Toxics

Client Sample ID: BP-VPB132-AIR-041812

Lab ID#: 1204433-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v042612	Date of Collection:	4/19/12 12:30:00 PM
Dil. Factor:	1.42	Date of Analysis:	4/26/12 06:32 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Styrene	0.14	0.086 J	0.60	0.37 J
1,3,5-Trimethylbenzene	0.14	0.084 J	0.70	0.41 J
1,2,4-Trimethylbenzene	0.14	0.57	0.70	2.8
alpha-Chlorotoluene	0.14	Not Detected U	0.74	Not Detected U
2,2,4-Trimethylpentane	0.14	0.13 J	0.66	0.60 J
tert-Butyl alcohol	0.71	0.65 J	2.2	2.0 J
Methylene Chloride	0.71	0.12 J	2.5	0.43 J
Hexachlorobutadiene	0.71	Not Detected U	7.6	Not Detected U
Ethanol	0.71	38	1.3	72
1,2,4-Trichlorobenzene	0.71	Not Detected U	5.3	Not Detected U

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

J = Estimated value.

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Butane	106-97-8	80%	8.4 NJ
2-Propanone	67-64-1	9.0%	11 NJ
Cyclopentane	287-92-3	78%	2.4 NJ
Octane, 2,5,6-trimethyl-	62016-14-2	64%	7.5 NJ
Nonadecane	629-92-5	43%	3.5 NJ
Decane, 2,2,9-trimethyl-	62238-00-0	72%	8.1 NJ
Decane, 2,2-dimethyl-	17302-37-3	72%	2.6 NJ
Decane, 2,3,5-trimethyl-	62238-11-3	59%	12 NJ
Heptane, 4-ethyl-2,2,6,6-tetramethyl-	62108-31-0	72%	14 NJ
Undecane, 2,8-dimethyl-	17301-25-6	64%	5.0 NJ

NJ =The identification is based on presumptive evidence; estimated value.

Q = Exceeds Quality Control limits.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	106	87-118
1,2-Dichloroethane-d4	111	78-134
Toluene-d8	122 Q	91-106

**Section 5**  
**VPB 132 Chain of Custody Records**



TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER **Nº 928405**

PAGE **1** OF **1**

PROJECT NO: <b>112G00622</b>	FACILITY: <b>D BRAYACK</b>	PROJECT MANAGER <b>D BRAYACK</b>	PHONE NUMBER <b>757-461 3824</b>	LABORATORY NAME AND CONTACT: <b>CHEMTECH / HUMMLER</b>
SAMPLERS (SIGNATURE) <i>SJ Conti</i>	<b>BETHPAGE 0U2 GW</b>	FIELD OPERATIONS LEADER <b>S CONTI</b>	PHONE NUMBER <b>412 551 2629</b>	ADDRESS <b>284 SHEFFIELD ST</b>
CARRIERWAYBILL NUMBER <b>FED EX 8735 5966 0520</b>			CITY, STATE <b>MOUNTAINSIDE, NJ. 07092</b>	

STANDARD TAT   
 RUSH TAT   
 24 hr.  48 hr.  72 hr.  7 day  14 day

CONTAINER TYPE  
PLASTIC (P) or GLASS (G)

PRESERVATIVE USED

400 HCL G

TYPE OF ANALYSIS  
VOCs (40ml)

COMMENTS

DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS		COMMENTS
1/24	1000	BP-VPB-TB-012412	TB	-	-	QC	G	2	2		LT BRN SL CLEAR
1/24	1015	BP-VPB132-GW-061	VPB 132	60	61	GW	G	2	2		TURBID
1/24	1330	BP-VPB132-GW-121	"	120	121	GW	G	2	2		
1/25	1030	BP-VPB132-GW-181	"	180	181	GW	G	2	2		
1/25	1350	BP-VPB132-GW-221	"	220	221	GW	G	2	2		
1/25	1600	BP-VPB132-GW-241	"	240	241	GW	G	2	2		TURBID
1/26	1110	BP-VPB132-GW-261	"	260	261	GW	G	2	2		
1/26	1400	BP-VPB132-GW-281	"	280	281	GW	G	2	2		

1. RELINQUISHED BY <i>SJ Conti</i>	DATE <b>1/26/12</b>	TIME <b>1630</b>	1. RECEIVED BY <b>FED EX</b>	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY <i>Fedex</i>	DATE <b>1/27/12</b>	TIME <b>9:05</b>	3. RECEIVED BY <i>Palok Shd</i>	DATE <b>1/27/12</b>	TIME <b>9:05</b>

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

Temp 4.0c

D1396



TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER **Nº 1108**

PAGE **1** OF **1**

PROJECT NO: <b>112G00622</b>	FACILITY: <b>BETHPAGE 002</b>	PROJECT MANAGER <b>D BRAYACK</b>	PHONE NUMBER <b>757 461 3824</b>	LABORATORY NAME AND CONTACT: <b>CHEMTECH / HUMMER</b>
SAMPLERS (SIGNATURE) <i>SJ Conti</i>		FIELD OPERATIONS LEADER <b>S CONTI</b>	PHONE NUMBER <b>412 351 2629</b>	ADDRESS <b>284 SHEFFIELD ST</b>
CARRIER/WAYBILL NUMBER <b>FED EX 8735 5966 0510</b>			CITY, STATE <b>MOUNTAINSIDE NJ 07092</b>	

STANDARD TAT   
 RUSH TAT   
 24 hr.  48 hr.  72 hr.  7 day  14 day

DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	NO. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)		PRESERVATIVE USED	TYPE OF ANALYSIS VOCs (40ml)	COMMENTS
2012	1200	BP-VPB-TB-013012	SJC	-	-	QC	G	2	2				TRIP BLANK
1/30	1300	BP-VPB132-GW-301	VPB 132	300	301	GW	G	2	2				
1/30	1500	BP-VPB132-GW-321	"	320	321	GW	G	2	2				
1/31	1050	BP-VPB132-GW-341	"	340	341	GW	G	2	2				
1/31	1315	BP-VPB132-GW-361	"	361	361	GW	G	2	2				
1/31	1510	BP-VPB132-GW-381	"	380	381	GW	G	2	2				
2/1	1000	BP-VPB132-GW-401	"	400	401	GW	G	2	2				
2/1	1230	BP-VPB132-GW-421	"	420	421	GW	G	2	2				
2/1	1415	BP-VPB132-GW-441	"	440	441	GW	G	2	2				
2/2	0940	BP-VPB132-GW-461	"	460	461	GW	G	2	2				TURBID
2/2	1205	BP-VPB132-GW-481	"	480	481	GW	G	2	2				
2/2	1435	BP-VPB132GW-501	"	500	501	GW	G	2	2				

1. RELINQUISHED BY <i>SJ Conti</i>	DATE <b>2/2/12</b>	TIME <b>1630</b>	1. RECEIVED BY <b>FED EX</b>	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY <b>Fedex</b>	DATE <b>2/3/12</b>	TIME <b>9:10</b>	3. RECEIVED BY <i>Palak Shah</i>	DATE <b>2/3/12</b>	TIME <b>9:10</b>

COMMENTS: **Temp 4°C**

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)



D1473



TETRA TECH NUS, INC.

112GD2751

CHAIN OF CUSTODY

NUMBER N<sup>o</sup> 1110

PAGE 1 OF 1

PROJECT NO: 112G00622	FACILITY: BETH PAGE CU2	PROJECT MANAGER D BRAYACK	PHONE NUMBER 757 461 3824	LABORATORY NAME AND CONTACT: CHEMTECH/ HUMMLER
SAMPLERS (SIGNATURE) <i>SJ Conti</i>		FIELD OPERATIONS LEADER S CONTI	PHONE NUMBER 412 551 2629	ADDRESS 284 SHEFFIELD ST
CARRIER/WAYBILL NUMBER FED Ex # 8735-5966-0494			CITY, STATE MOUNTAIN SIDE NJ 07092	

DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)		PRESERVATIVE USED	TYPE OF ANALYSIS VOCs (40ml) VOCs (20ml)	COMMENTS
2/8	0800	BP-VPB-TB-0208	12-SJC	-		QC	G	2	2				
2/8	1000	BP-VPB132-GW-641	132	640	641	GW	G	2	1				① = UNPRESERVED
2/8	1435	BP-VPB132-GW-681	"	680	681	GW	G	1	1				① = "
2/9	1010	BP-VPB132-GW-701	"	700	701	GW	G	2	1				① = "
2/9	1310	BP-VPB132-GW-721	"	720	721	GW	G	2	1				① = "
2/9	1515	BP-VPB132-GW-741	"	740	741	GW	G	1	1				① = "

1. RELINQUISHED BY <i>SJ Conti</i>	DATE 2/9/12	TIME 1630	1. RECEIVED BY FED EX	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY Fedex	DATE 2/10/12	TIME 9:10	3. RECEIVED BY PS	DATE 2/10/12	TIME 9:10

COMMENTS: Temp 4°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R FORM NO. TINUS-001



TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER **Nº 1111**PAGE **1** OF **1**

DIS16

PROJECT NO: <b>112G02751</b>		FACILITY: <b>BETH PAGE CU2</b>		PROJECT MANAGER <b>D. BRAYACK</b>		PHONE NUMBER <b>757 461 3824</b>		LABORATORY NAME AND CONTACT: <b>CHEMTECH/ HUMMLER</b>			
SAMPLERS (SIGNATURE) <b>SJ Conte</b>		FIELD OPERATIONS LEADER <b>S CONTI</b>		PHONE NUMBER <b>412 551 2629</b>		ADDRESS <b>284 SHEFFIELD ST</b>				CITY, STATE <b>MOUNTAINSIDE, NJ 07092</b>	
STANDARD TAT <input type="checkbox"/> RUSH TAT <input type="checkbox"/> <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input checked="" type="checkbox"/> 72 hr. <input type="checkbox"/> 7 day <input type="checkbox"/> 14 day		CARRIER/WAYBILL NUMBER <b>FED EX 8735 5966 0472</b>		CONTAINER TYPE PLASTIC (P) or GLASS (G)		PRESERVATIVE USED		<div style="text-align: center;"> <p>TYPE OF ANALYSIS</p> <p>VOC'S (40 ml)    VOC'S (90 ml)</p> <p>XOC    HCL    G    G</p> <p>4PC    4PC</p> </div>			
DATE YEAR <b>2012</b>		72 HR FAX RESULTS		TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)				
TIME	SAMPLE ID	LOCATION ID									
<b>2/13 1100</b>	<b>BP-VPB-TB-021312</b>	<b>TB</b>	<b>-</b>	<b>-</b>	<b>QC</b>	<b>G</b>	<b>2</b>	<b>2</b>			
<b>2/13 1215</b>	<b>BP-VPB132-GW-761</b>	<b>VPB 132</b>	<b>760</b>	<b>761</b>	<b>GW</b>	<b>G</b>	<b>1</b>		<b>(1)</b>		<b>(1) = UNPRESERVED</b>
<b>2/13 1450</b>	<b>BP-VPB132-GW-781</b>	<b>"</b>	<b>780</b>	<b>781</b>	<b>GW</b>	<b>G</b>	<b>2</b>	<b>1</b>	<b>(1)</b>		<b>"</b>
<b>2/14 1310</b>	<b>BP-VPB132-GW-821</b>	<b>"</b>	<b>820</b>	<b>821</b>	<b>GW</b>	<b>G</b>	<b>2</b>	<b>1</b>	<b>(1)</b>		<b>"</b>
<b>2/14 1530</b>	<b>BP-VPB132-GW-841</b>	<b>"</b>	<b>840</b>	<b>841</b>	<b>GW</b>	<b>G</b>	<b>2</b>	<b>1</b>	<b>(1)</b>		<b>"</b>
1. RELINQUISHED BY <b>SJ Conte</b>		DATE <b>2/14/12</b>	TIME <b>1630</b>	1. RECEIVED BY <b>FED EX</b>		DATE	TIME				
2. RELINQUISHED BY		DATE	TIME	2. RECEIVED BY		DATE	TIME				
3. RELINQUISHED BY <b>Fed Ex</b>		DATE <b>2/15/12</b>	TIME <b>9:15</b>	3. RECEIVED BY <b>Ken Ruas</b>		DATE <b>2/15/12</b>	TIME <b>9:15</b>				
COMMENTS											

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE)

YELLOW (FIELD COPY)

PINK (FILE COPY)

4/02R  
FORM NO. TINUS-001





D1593



TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER **N<sup>o</sup> 1113**

PAGE **1** OF **1**

PROJECT NO: <b>112602751</b>		FACILITY: <b>BETHPAGE CU2</b>		PROJECT MANAGER <b>D BRAYACK</b>		PHONE NUMBER <b>757 461 3824</b>		LABORATORY NAME AND CONTACT: <b>CHEMTECH/HUMMLER</b>						
SAMPLERS (SIGNATURE) <b>SjConte</b>				FIELD OPERATIONS LEADER <b>S CONTI</b>		PHONE NUMBER <b>412 551 2629</b>		ADDRESS <b>284 SHEFFIELD ST</b>						
				CARRIER/WAYBILL NUMBER <b>FED EX # 8735 5966 0450</b>		CITY, STATE <b>MOUNTAINSIDE NJ 07092</b>								
STANDARD TAT <input type="checkbox"/> RUSH TAT <input type="checkbox"/> <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input checked="" type="checkbox"/> 72 hr. <input type="checkbox"/> 7 day <input type="checkbox"/> 14 day				CONTAINER TYPE PLASTIC (P) or GLASS (G)		PRESERVATIVE USED		<table border="1"> <tr> <td>70C HCL G</td> <td>70C G</td> <td>70C G</td> </tr> </table>				70C HCL G	70C G	70C G
70C HCL G	70C G	70C G												
DATE YEAR <b>2012</b>				72 HR FAX RESULTS		TYPE OF ANALYSIS		COMMENTS						
DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)					No. OF CONTAINERS		
<b>2/21</b>	<b>1000</b>	<b>BP-VPB-TB-022112</b>	<b>TB</b>	<b>-</b>	<b>-</b>	<b>QC</b>	<b>G</b>	<b>2</b>	<b>2</b>	<b>TURBID</b>				
<b>2/21</b>	<b>1110</b>	<b>BP-VPB132-GW-942</b>	<b>VPB 132</b>	<b>941</b>	<b>942</b>	<b>GW</b>	<b>G</b>	<b>1</b>	<b>1</b>	<b>UNPRESERVED</b>				
<b>2/22</b>	<b>1140</b>	<b>BP-VPB132-SB-971</b>	<b>"</b>	<b>970</b>	<b>971</b>	<b>SO</b>	<b>G</b>	<b>1</b>	<b>1</b>	<b>V-stiff Gray Sandy Clays - Moist (SC)</b>				
1. RELINQUISHED BY <b>SjConte</b>				DATE <b>2/22/12</b>	TIME <b>1600</b>	1. RECEIVED BY <b>FED EX</b>		DATE	TIME					
2. RELINQUISHED BY <b>SjConte</b>				DATE	TIME	2. RECEIVED BY		DATE	TIME					
3. RELINQUISHED BY <b>Fedex</b>				DATE <b>2/23/12</b>	TIME <b>9:10</b>	3. RECEIVED BY <b>RS</b>		DATE <b>2/23/12</b>	TIME <b>9:10</b>					
COMMENTS <b>Temp 4°C</b>														

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE)

YELLOW (FIELD COPY)

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4/02R  
FORM NO. TINUS-001



TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER

No 1115

PAGE 1 OF 1

1204433

PROJECT NO: 112G02751		FACILITY: BEHPAGE 002		PROJECT MANAGER D BRAYACK		PHONE NUMBER 757 461 3824		LABORATORY NAME AND CONTACT: AIR TOXICS LTD/A. SCOTT							
SAMPLERS (SIGNATURE) SjConte		CTO 066		FIELD OPERATIONS LEADER S CONTI		PHONE NUMBER 412 551 2629		ADDRESS 180-B BLUE RAVINE RD							
				CARRIER/WAYBILL NUMBER FED EX # 8770 6393 5783				CITY, STATE FOLSOM, CA. 95630							
STANDARD TAT <input type="checkbox"/>		RUSH TAT <input type="checkbox"/>				CONTAINER TYPE PLASTIC (P) or GLASS (G)									
<input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 72 hr. <input type="checkbox"/> 7 day <input type="checkbox"/> 14 day						PRESERVATIVE USED									
DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, OC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS 3 HR SUMMA VOC TO 15A Lab ID			INITIAL	FINAL	COMMENTS	
4/18	1200 → 1600	BP-VPB132-AIR-041812	VPB 132	-	-	AIR	G	1							
4/19	0830 → 1230														
1. RELINQUISHED BY SjConte		DATE 4/19/12	TIME 1500	1. RECEIVED BY FED EX		DATE	TIME	CUSTODY SEAL INTACT? Y N NO		DATE	TIME				
2. RELINQUISHED BY		DATE	TIME	2. RECEIVED BY Jan All		DATE 4/20/12	TIME 0915			DATE	TIME				
3. RELINQUISHED BY		DATE	TIME	3. RECEIVED BY		DATE	TIME			DATE	TIME				
COMMENTS															

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R FORM NO. TINUS-001

0334 of 0354

**Section 6**

**VPB 132 Validation Letter and Table**



**MEMO TO: D. BRAYACK - PAGE 2**  
**DATE: MARCH 20, 2012**

The continuing calibration percent differences and/or percent drifts were greater than the 20% quality control limit for 2-butanone, methylcyclohexane, tetrachloroethene, isopropylbenzene, 1,1,2,2-tetrachloroethane and 1,2-dibromo-3-chloropropane on 01/27/2012 at 13:18 on instrument MSVOA F. The nondetected results for 2-butanone, methylcyclohexane, tetrachloroethene, isopropylbenzene, 1,1,2,2-tetrachloroethane and 1,2-dibromo-3-chloropropane were qualified as estimated "UJ" in the affected sample BP-VPB132-GW-121.

The initial calibration %RSDs for 1,2-dibromo-3-chloropropane, chloroethane, trans-1,4-dichloropropene, dibromochloromethane and isopropylbenzene were greater than the 15% quality control limit on 01/30/2012 on instrument MSVOA G. The positive and nondetected results for 1,2-dibromo-3-chloropropane, chloroethane, trans-1,4-dichloropropene, dibromochloromethane and isopropylbenzene were qualified as estimated "J" and "UJ" in the affected samples BP-VPB-TB-012412, BP-VPB132-GW-061, BP-VPB132-GW-181, BP-VPB132-GW-221, BP-VPB132-GW-261 and BP-VPB132-GW-281.

Samples BP-VPB132-GW-181 and BP-VPB132-GW-261 had surrogate recoveries less than the quality control limits for toluene-d8. The samples were reanalyzed and had surrogate recoveries for toluene-d8 less than the quality control limits. The original analyses were chosen for validation purposes. The positive and nondetected results reported for samples BP-VPB132-GW-181 and BP-VPB132-GW-261 were qualified as estimated, "J" and "UJ", respectively.

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

#### Additional Comments

Groundwater samples BP-VPB132-GW-121 and BP-VPB132-GW-241 were analyzed as soil samples due to the amount of sediment in the samples. The sample results were reported as ug/kg on a wet weight basis.

The original result for benzene was above the calibration range of the instrument for sample BP-VPB132-GW-221. The sample was reanalyzed at a 5X dilution. The sample result for benzene from the dilution was used for validation purposes.

Nondetected results are reported to the limit of detection (LOD).

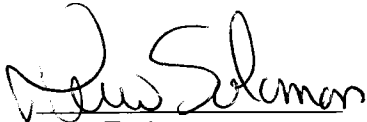
#### EXECUTIVE SUMMARY

**Laboratory Performance Issues:** Several initial %RSDs and continuing calibration %Ds / % drifts for several compounds exceeded the quality control limits.

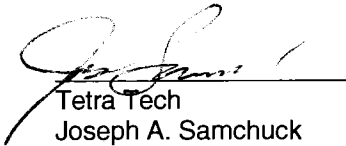
**Other Factors Affecting Data Quality:** Several surrogate recoveries were below the quality control limits. Positive results below the RL and above the detection limit were qualified as estimated.

The data for these analyses were reviewed with reference to SOP # HW-24 Revision #2, August 2008, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846/8260B, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009. The text of this report has been formulated to address only those problem areas affecting data quality.

**MEMO TO: D. BRAYACK - PAGE 3**  
**DATE: MARCH 20, 2012**



Tetra Tech  
Terri L. Solomon  
Chemist/Data Validator



Tetra Tech  
Joseph A. Samchuck  
Data Validation Quality Assurance Officer

**Attachments:**

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Region II Data Validation Forms
4. Appendix D - Support Documentation

**Appendix A**

Qualified Analytical Results

**Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times$  IDL for inorganics and  $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $>40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $<30\%$
- Z = Uncertainty at 2 sigma deviation is less than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed



PROJ_NO: 00622 SDG: D1310 FRACTION: OV MEDIA: WATER	NSAMPLE	BP-VPB132-GW-061			BP-VPB132-GW-181			BP-VPB132-GW-221			BP-VPB132-GW-221DL		
	LAB_ID	D1310-02			D1310-04			D1310-05			D1310-05DL		
	SAMP_DATE	1/24/2012			1/25/2012			1/25/2012			1/25/2012		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	U		0.5	UJ	R	0.5	U					
1,1,2,2-TETRACHLOROETHANE	0.5	U		0.5	UJ	R	0.5	U					
1,1,2-TRICHLOROETHANE	0.5	U		0.5	UJ	R	0.5	U					
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		0.5	UJ	R	0.5	U					
1,1-DICHLOROETHANE	0.5	U		0.5	UJ	R	5.1						
1,1-DICHLOROETHENE	0.5	U		0.5	UJ	R	0.87	J	P				
1,2,4-TRICHLOROBENZENE	0.5	U		0.5	UJ	R	0.5	U					
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ	C	0.5	UJ	CR	0.5	UJ	C				
1,2-DIBROMOETHANE	0.5	U		0.5	UJ	R	0.5	U					
1,2-DICHLOROBENZENE	0.5	U		0.5	UJ	R	0.5	U					
1,2-DICHLOROETHANE	0.5	U		0.5	UJ	R	4.6						
1,2-DICHLOROPROPANE	0.5	U		0.5	UJ	R	0.5	U					
1,3-DICHLOROBENZENE	0.5	U		0.5	UJ	R	0.5	U					
1,4-DICHLOROBENZENE	0.5	U		0.5	UJ	R	0.5	U					
2-BUTANONE	2.5	U		2.5	UJ	R	2.5	U					
2-HEXANONE	2.5	U		2.5	UJ	R	2.5	U					
4-METHYL-2-PENTANONE	2.5	U		2.5	UJ	R	2.5	U					
ACETONE	15			2.5	UJ	R	2.5	U					
BENZENE	0.5	U		0.5	UJ	R				280			
BROMODICHLOROMETHANE	0.5	U		0.5	UJ	R	0.5	U					
BROMOFORM	0.5	U		0.5	UJ	R	0.5	U					
BROMOMETHANE	0.5	U		0.5	UJ	R	0.5	U					
CARBON DISULFIDE	0.5	U		0.5	UJ	R	0.5	U					
CARBON TETRACHLORIDE	0.5	U		0.5	UJ	R	0.5	U					
CHLOROETHANE	0.5	U		0.5	UJ	R	0.5	U					
CHLORODIBROMOMETHANE	0.5	UJ	C	0.5	UJ	CR	0.5	UJ	C				
CHLOROETHANE	0.5	UJ	C	0.5	UJ	CR	0.5	UJ	C				
CHLOROFORM	2.2			0.5	UJ	R	3.2						
CHLOROMETHANE	0.5	U		0.5	UJ	R	0.5	U					
CIS-1,2-DICHLOROETHENE	0.5	U		0.5	UJ	R	0.44	J	P				
CIS-1,3-DICHLOROPROPENE	0.5	U		0.5	UJ	R	0.5	U					
CYCLOHEXANE	0.5	U		0.5	UJ	R	2.4						
DICHLORODIFLUOROMETHANE	0.5	U		0.5	UJ	R	0.5	U					
ETHYLBENZENE	0.5	U		0.5	UJ	R	0.5	U					
ISOPROPYLBENZENE	0.5	UJ	C	0.5	UJ	CR	1.1	J	C				

PROJ_NO: 00622 SDG: D1310 FRACTION: OV MEDIA: WATER	NSAMPLE	BP-VPB132-GW-061			BP-VPB132-GW-181			BP-VPB132-GW-221			BP-VPB132-GW-221DL		
	LAB_ID	D1310-02			D1310-04			D1310-05			D1310-05DL		
	SAMP_DATE	1/24/2012			1/25/2012			1/25/2012			1/25/2012		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	1	U		1	UJ	R	1	U					
METHYL ACETATE	0.5	U		0.5	UJ	R	0.5	U					
METHYL CYCLOHEXANE	0.5	U		0.5	UJ	R	0.93	J	P				
METHYL TERT-BUTYL ETHER	0.5	U		0.5	UJ	R	14						
METHYLENE CHLORIDE	0.5	U		0.5	UJ	R	0.5	U					
O-XYLENE	0.5	U		0.5	UJ	R	0.5	U					
STYRENE	0.5	U		0.5	UJ	R	0.5	U					
TETRACHLOROETHENE	0.5	U		0.5	UJ	R	1.7						
TOLUENE	0.5	U		0.5	UJ	R	0.5	U					
TRANS-1,2-DICHLOROETHENE	0.5	U		0.5	UJ	R	0.5	U					
TRANS-1,3-DICHLOROPROPENE	0.5	UJ	C	0.5	UJ	CR	0.5	UJ	C				
TRICHLOROETHENE	0.5	U		0.66	J	PR	3.1						
TRICHLOROFLUOROMETHANE	0.5	U		0.5	UJ	R	0.5	U					
VINYL CHLORIDE	0.5	U		0.5	UJ	R	0.5	U					

PROJ_NO: 00622 SDG: D1310 FRACTION: OV MEDIA: WATER	NSAMPLE	BP-VPB132-GW-261			BP-VPB132-GW-281			BP-VPB-TB-012412		
	LAB_ID	D1310-07			D1310-08			D1310-01		
	SAMP_DATE	1/26/2012			1/26/2012			1/24/2012		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0		
	DUP_OF									
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	UJ	R	0.5	U		0.5	U		
1,1,2,2-TETRACHLOROETHANE	0.5	UJ	R	0.5	U		0.5	U		
1,1,2-TRICHLOROETHANE	0.5	UJ	R	0.5	U		0.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	UJ	R	0.5	U		0.5	U		
1,1-DICHLOROETHANE	5.1	J	R	0.5	U		0.5	U		
1,1-DICHLOROETHENE	0.5	UJ	R	0.5	U		0.5	U		
1,2,4-TRICHLOROBENZENE	0.5	UJ	R	0.5	U		0.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ	CR	0.5	UJ	C	0.5	UJ	C	
1,2-DIBROMOETHANE	0.5	UJ	R	0.5	U		0.5	U		
1,2-DICHLOROBENZENE	0.5	UJ	R	0.5	U		0.5	U		
1,2-DICHLOROETHANE	0.5	UJ	R	0.5	U		0.5	U		
1,2-DICHLOROPROPANE	0.5	UJ	R	0.5	U		0.5	U		
1,3-DICHLOROBENZENE	0.5	UJ	R	0.5	U		0.5	U		
1,4-DICHLOROBENZENE	0.5	UJ	R	0.5	U		0.5	U		
2-BUTANONE	2.5	UJ	R	2.5	U		2.5	U		
2-HEXANONE	2.5	UJ	R	2.5	U		2.5	U		
4-METHYL-2-PENTANONE	2.5	UJ	R	2.5	U		2.5	U		
ACETONE	2.5	UJ	R	2.5	U		2.5	U		
BENZENE	0.5	UJ	R	0.5	U		0.5	U		
BROMODICHLOROMETHANE	0.5	UJ	R	0.5	U		0.5	U		
BROMOFORM	0.5	UJ	R	0.5	U		0.5	U		
BROMOMETHANE	0.5	UJ	R	0.5	U		0.5	U		
CARBON DISULFIDE	0.5	UJ	R	0.57	J	P	0.5	U		
CARBON TETRACHLORIDE	0.5	UJ	R	0.5	U		0.5	U		
CHLOROBENZENE	0.5	UJ	R	0.5	U		0.5	U		
CHLORODIBROMOMETHANE	0.5	UJ	CR	0.5	UJ	C	0.5	UJ	C	
CHLOROETHANE	0.5	UJ	CR	0.5	UJ	C	0.5	UJ	C	
CHLOROFORM	0.5	UJ	R	0.5	U		0.5	U		
CHLOROMETHANE	0.5	UJ	R	0.5	U		0.5	U		
CIS-1,2-DICHLOROETHENE	0.5	UJ	R	0.5	U		0.5	U		
CIS-1,3-DICHLOROPROPENE	0.5	UJ	R	0.5	U		0.5	U		
CYCLOHEXANE	0.5	UJ	R	0.5	U		0.5	U		
DICHLORODIFLUOROMETHANE	0.5	UJ	R	0.5	U		0.5	U		
ETHYLBENZENE	0.5	UJ	R	0.5	U		0.5	U		
ISOPROPYLBENZENE	0.5	UJ	CR	0.5	UJ	C	0.5	UJ	C	

PROJ_NO: 00622 SDG: D1310 FRACTION: OV MEDIA: WATER	NSAMPLE	BP-VPB132-GW-261			BP-VPB132-GW-281			BP-VPB-TB-012412		
	LAB_ID	D1310-07			D1310-08			D1310-01		
	SAMP_DATE	1/26/2012			1/26/2012			1/24/2012		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0			100.0		
	DUP_OF									
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	1	UJ	R	1	U		1	U		
METHYL ACETATE	0.5	UJ	R	0.5	U		0.5	U		
METHYL CYCLOHEXANE	0.5	UJ	R	0.5	U		0.5	U		
METHYL TERT-BUTYL ETHER	3.8	J	R	0.5	U		0.5	U		
METHYLENE CHLORIDE	0.5	UJ	R	0.5	U		0.5	U		
O-XYLENE	0.5	UJ	R	0.5	U		0.5	U		
STYRENE	0.5	UJ	R	0.5	U		0.5	U		
TETRACHLOROETHENE	0.5	UJ	R	0.5	U		0.5	U		
TOLUENE	0.5	UJ	R	0.5	U		0.5	U		
TRANS-1,2-DICHLOROETHENE	0.5	UJ	R	0.5	U		0.5	U		
TRANS-1,3-DICHLOROPROPENE	0.5	UJ	CR	0.5	UJ	C	0.5	UJ	C	
TRICHLOROETHENE	0.5	UJ	R	0.5	U		0.5	U		
TRICHLOROFLUOROMETHANE	0.5	UJ	R	0.5	U		0.5	U		
VINYL CHLORIDE	0.5	UJ	R	0.5	U		0.5	U		

PROJ_NO: 00622 SDG: D1310 FRACTION: OV MEDIA: SOIL	NSAMPLE	BP-VPB132-GW-121			BP-VPB132-GW-241		
	LAB_ID	D1310-03			D1310-06		
	SAMP_DATE	1/24/2012			1/25/2012		
	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	2.55	U		2.5	U		
1,1,2,2-TETRACHLOROETHANE	2.55	UJ	C	2.5	U		
1,1,2-TRICHLOROETHANE	2.55	U		2.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	2.55	U		2.5	U		
1,1-DICHLOROETHANE	2.55	U		2.5	U		
1,1-DICHLOROETHENE	2.55	U		2.5	U		
1,2,4-TRICHLOROBENZENE	2.55	U		2.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	2.55	UJ	C	2.5	U		
1,2-DIBROMOETHANE	2.55	U		2.5	U		
1,2-DICHLOROBENZENE	2.55	U		2.5	U		
1,2-DICHLOROETHANE	2.55	U		2.5	U		
1,2-DICHLOROPROPANE	2.55	U		2.5	U		
1,3-DICHLOROBENZENE	2.55	U		2.5	U		
1,4-DICHLOROBENZENE	2.55	U		2.5	U		
2-BUTANONE	12.5	UJ	C	12.5	U		
2-HEXANONE	12.5	U		12.5	U		
4-METHYL-2-PENTANONE	12.5	U		12.5	U		
ACETONE	11	J	P	35			
BENZENE	2.55	U		3.4	J	P	
BROMODICHLOROMETHANE	2.55	U		2.5	U		
BROMOFORM	2.55	U		2.5	U		
BROMOMETHANE	2.55	U		2.5	U		
CARBON DISULFIDE	2.55	U		2.5	U		
CARBON TETRACHLORIDE	2.55	U		2.5	U		
CHLOROBENZENE	2.55	U		2.5	U		
CHLORODIBROMOMETHANE	2.55	U		2.5	U		
CHLOROETHANE	2.55	UJ	C	2.5	U		
CHLOROFORM	2.55	U		2.5	U		
CHLOROMETHANE	2.55	U		2.5	U		
CIS-1,2-DICHLOROETHENE	2.55	U		2.5	U		
CIS-1,3-DICHLOROPROPENE	2.55	U		2.5	U		
CYCLOHEXANE	2.55	U		2.5	U		
DICHLORODIFLUOROMETHANE	2.55	U		2.5	U		
ETHYLBENZENE	2.55	U		2.5	U		
ISOPROPYLBENZENE	2.55	UJ	C	2.5	U		

<b>PROJ_NO: 00622</b> <b>SDG: D1310</b> <b>FRACTION: OV</b> <b>MEDIA: SOIL</b>	NSAMPLE	BP-VPB132-GW-121			BP-VPB132-GW-241		
	LAB_ID	D1310-03			D1310-06		
	SAMP_DATE	1/24/2012			1/25/2012		
	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	5	U		4.95	U		
METHYL ACETATE	2.55	U		2.5	U		
METHYL CYCLOHEXANE	2.55	UJ	C	2.5	U		
METHYL TERT-BUTYL ETHER	2.55	U		2.5	U		
METHYLENE CHLORIDE	2.55	U		2.5	U		
O-XYLENE	2.55	U		2.5	U		
STYRENE	2.55	U		2.5	U		
TETRACHLOROETHENE	2.55	UJ	C	2.5	U		
TOLUENE	2.55	U		2.5	U		
TRANS-1,2-DICHLOROETHENE	2.55	U		2.5	U		
TRANS-1,3-DICHLOROPROPENE	2.55	U		2.5	U		
TRICHLOROETHENE	2.55	U		2.5	U		
TRICHLOROFLUOROMETHANE	2.55	U		2.5	U		
VINYL CHLORIDE	2.55	U		2.5	U		



**VOC**

The laboratory indicated that a number of the SDG sample vials were found to have bubbles in them. Samples with at least one (1) sample vial that did not have bubbles were not qualified as it is assumed the laboratory used the sample vial without bubbles for the VOC analysis. The laboratory indicated that both vials for sample BP-VPB132-GW-341 had multiple small bubbles and that both vials for sample BP-VPB132-GW-401 had multiple medium bubbles. No validation action was taken for samples BP-VPB132-GW-341 and BP-VPB132-GW-401. The laboratory indicated that both vials for sample BP-VPB132-GW-361 had a large bubble. The non-detected results for sample BP-VPB132-GW-361 were qualified rejected, (UR), due to the presence of the large bubbles in the sample vials.

The following VOC contaminant was detected in the method blank VBF0203S1 at the following maximum concentration affecting sample BP-VPB132-GW-461.

<u>Analyte</u>	<u>Maximum Conc. µg/kg</u>	<u>Action Level µg/kg</u>
Methylene chloride	16	160

An action level of ten times the maximum level for the common laboratory contaminant methylene chloride has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive sample result was less than the action level and was qualified non-detected, (U).

The continuing calibration verification (CCV) percent difference (%D) was greater than the 20% quality control limit for trichlorofluoromethane and methylene chloride for instrument MSVOA\_F on 02/03/12 @ 12:15.

**Affected sample:** BP-VPB132-GW-461

**Action:** The non-detected trichlorofluoromethane result was qualified estimated, (UJ). The methylene chloride result was qualified for method blank contamination and therefore no validation action was necessary.

The CCV %D was greater than the 20% quality control limit for bromomethane, chloroethane, and methyl acetate for instrument MSVOA\_G on 02/06/12 @ 11:39.

**Affected samples:** BP-VPB132-GW-421, BP-VPB132-GW-441, and BP-VPB132-GW-361

**Action:** The non-detected bromomethane, chloroethane, and methyl acetate results were qualified estimated, (UJ).

The Laboratory Control Sample (LCS) percent recovery (%R) was greater than the quality control limit for trichlorofluoromethane, methylene chloride, and bromodichloromethane for the batch VBF0203S1 affecting the sample listed.

**Affecting sample:** BP-VPB132-GW-461

**Action:** No action was necessary as all analyte results were non-detected.

The matrix spike (MS) %R was greater than the quality control limit for 1,1,2,2-tetrachloroethane for the spiked sample BP-VPB132-GW-461.

**Action:** The sample 1,1,2,2-tetrachloroethane result was non-detected and was not qualified.

**Additional Comments**

Forty-nine (49) analytes were reported for VOCs.



TO: D. BRAYACK  
SDG: D1396

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Non-detected sample results were reported to the LOD.

### **EXECUTIVE SUMMARY**

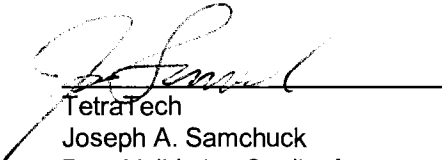
**Laboratory Performance Issues:** Sample BP-VPB132-GW-461 methylene chloride result was qualified for method blank contamination. Sample VOC results were qualified for CCV %D quality control limit non-compliances.

**Other Factors Affecting Data Quality:** Sample BP-VPB132-GW-361 non-detected results were qualified due to the presence of large bubbles in both sample vials.

The data for these analyses were reviewed with reference to the USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP #HW-24 Revision #2 August 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).



TetraTech  
Joseph Kalinyak  
Chemist/Data Validator



TetraTech  
Joseph A. Samchuck  
Data Validation Quality Assurance Officer

Attachments:  
Appendix A - Qualified Analytical Results  
Appendix B - Results as Reported by the Laboratory  
Appendix C - Region II Data Validation Forms  
Appendix D - Support Documentation

**Appendix A**

Qualified Analytical Results

### **Value Qualifier Key (Val Qual)**

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

### **DATA QUALIFICATION CODE (QUAL CODE)**

#### **Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times$  IDL for inorganics and  $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $>40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $<30\%$
- Z = Uncertainty at 2 sigma deviation is less than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00622	NSAMPLE	BP-VPB132-GW-461		
SDG: D1396	LAB_ID	D1396-10		
FRACTION: OV	SAMP_DATE	2/2/2012		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	2.5	U		
1,1,2,2-TETRACHLOROETHANE	2.5	U		
1,1,2-TRICHLOROETHANE	2.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	2.5	U		
1,1-DICHLOROETHANE	2.5	U		
1,1-DICHLOROETHENE	2.5	U		
1,2,4-TRICHLOROBENZENE	2.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	2.5	U		
1,2-DIBROMOETHANE	2.5	U		
1,2-DICHLOROBENZENE	2.5	U		
1,2-DICHLOROETHANE	2.5	U		
1,2-DICHLOROPROPANE	2.5	U		
1,3-DICHLOROBENZENE	2.5	U		
1,4-DICHLOROBENZENE	2.5	U		
2-BUTANONE	12.5	U		
2-HEXANONE	12.5	U		
4-METHYL-2-PENTANONE	12.5	U		
ACETONE	29			
BENZENE	2.5	U		
BROMODICHLOROMETHANE	2.5	U		
BROMOFORM	2.5	U		
BROMOMETHANE	2.5	U		
CARBON DISULFIDE	2.5	U		
CARBON TETRACHLORIDE	2.5	U		
CHLOROBENZENE	2.5	U		
CHLORODIBROMOMETHANE	2.5	U		
CHLOROETHANE	2.5	U		
CHLOROFORM	2.5	U		
CHLOROMETHANE	2.5	U		
CIS-1,2-DICHLOROETHENE	2.5	U		
CIS-1,3-DICHLOROPROPENE	2.5	U		
CYCLOHEXANE	2.5	U		
DICHLORODIFLUOROMETHANE	2.5	U		
ETHYLBENZENE	2.5	U		
ISOPROPYLBENZENE	2.5	U		

PROJ_NO: 00622	NSAMPLE	BP-VPB132-GW-461		
SDG: D1396	LAB_ID	D1396-10		
FRACTION: OV	SAMP_DATE	2/2/2012		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
M+P-XYLENES	5	U		
METHYL ACETATE	2.5	U		
METHYL CYCLOHEXANE	2.5	U		
METHYL TERT-BUTYL ETHER	2.5	U		
METHYLENE CHLORIDE	13	U	A	
O-XYLENE	2.5	U		
STYRENE	2.5	U		
TETRACHLOROETHENE	2.5	U		
TOLUENE	2.5	U		
TRANS-1,2-DICHLOROETHENE	2.5	U		
TRANS-1,3-DICHLOROPROPENE	2.5	U		
TRICHLOROETHENE	2.5	U		
TRICHLOROFLUOROMETHANE	2.5	UJ	C	
VINYL CHLORIDE	2.5	U		

PROJ_NO: 00622 SDG: D1396 FRACTION: OV MEDIA: WATER	NSAMPLE	BP-VPB132-GW-301			BP-VPB132-GW-321			BP-VPB132-GW-341			BP-VPB132-GW-361		
	LAB_ID	D1396-02			D1396-03			D1396-04			D1396-05		
	SAMP_DATE	1/30/2012			1/30/2012			1/31/2012			1/31/2012		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
DUP_OF													
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,1,2,2-TETRACHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,1,2-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,1-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,1-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,2,4-TRICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,2-DIBROMOETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,2-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,2-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,2-DICHLOROPROPANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,3-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
1,4-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
2-BUTANONE	2.5	U		2.5	U		2.5	U		2.5	UR	Q	
2-HEXANONE	2.5	U		2.5	U		2.5	U		2.5	UR	Q	
4-METHYL-2-PENTANONE	2.5	U		2.5	U		2.5	U		2.5	UR	Q	
ACETONE	2.5	U		2.5	U		2.5	U		2.5	UR	Q	
BENZENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
BROMODICHLOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
BROMOFORM	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
BROMOMETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	CQ	
CARBON DISULFIDE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
CARBON TETRACHLORIDE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
CHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
CHLORODIBROMOMETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
CHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	CQ	
CHLOROFORM	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
CHLOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
CIS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
CIS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
CYCLOHEXANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
DICHLORODIFLUOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
ETHYLBENZENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
ISOPROPYLBENZENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	

PROJ_NO: 00622 SDG: D1396 FRACTION: OV MEDIA: WATER	NSAMPLE	BP-VPB132-GW-381			BP-VPB132-GW-401			BP-VPB132-GW-421			BP-VPB132-GW-441		
	LAB_ID	D1396-06			D1396-07			D1396-08			D1396-09		
	SAMP_DATE	1/31/2012			2/1/2012			2/1/2012			2/1/2012		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,1,2,2-TETRACHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,1,2-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,1-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,1-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2,4-TRICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2-DIBROMOETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2-DICHLOROPROPANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,3-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
1,4-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
2-BUTANONE	2.5	U		2.5	U		2.5	U		2.5	U		
2-HEXANONE	2.5	U		2.5	U		2.5	U		2.5	U		
4-METHYL-2-PENTANONE	2.5	U		2.5	U		2.5	U		2.5	U		
ACETONE	2.5	U		2.5	U		2.5	U		2.5	U		
BENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
BROMODICHLOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
BROMOFORM	0.5	U		0.5	U		0.5	U		0.5	U		
BROMOMETHANE	0.5	U		0.5	U		0.5	UJ	C	0.5	UJ	C	
CARBON DISULFIDE	0.5	U		0.5	U		0.5	U		0.5	U		
CARBON TETRACHLORIDE	0.5	U		0.5	U		0.5	U		0.5	U		
CHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
CHLORODIBROMOMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
CHLOROETHANE	0.5	U		0.5	U		0.5	UJ	C	0.5	UJ	C	
CHLOROFORM	0.5	U		0.5	U		0.5	U		0.5	U		
CHLOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
CIS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
CIS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		0.5	U		
CYCLOHEXANE	0.5	U		0.5	U		0.5	U		0.5	U		
DICHLORODIFLUOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
ETHYLBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
ISOPROPYLBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		

PROJ_NO: 00622	NSAMPLE	BP-VPB132-GW-481			BP-VPB132-GW-501			BP-VPB-TB-013012-SJC		
SDG: D1396	LAB_ID	D1396-11			D1396-12			D1396-01		
FRACTION: OV	SAMP_DATE	2/2/2012			2/2/2012			1/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		
1,1,2,2-TETRACHLOROETHANE	0.5	U		0.5	U		0.5	U		
1,1,2-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		0.5	U		0.5	U		
1,1-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		
1,1-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		
1,2,4-TRICHLOROBENZENE	0.5	U		0.5	U		0.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		0.5	U		0.5	U		
1,2-DIBROMOETHANE	0.5	U		0.5	U		0.5	U		
1,2-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		
1,2-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		
1,2-DICHLOROPROPANE	0.5	U		0.5	U		0.5	U		
1,3-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		
1,4-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		
2-BUTANONE	2.5	U		2.5	U		2.5	U		
2-HEXANONE	2.5	U		2.5	U		2.5	U		
4-METHYL-2-PENTANONE	2.5	U		2.5	U		2.5	U		
ACETONE	2.5	U		2.5	U		2.5	U		
BENZENE	0.5	U		0.5	U		0.5	U		
BROMODICHLOROMETHANE	0.5	U		0.5	U		0.5	U		
BROMOFORM	0.5	U		0.5	U		0.5	U		
BROMOMETHANE	0.5	U		0.5	U		0.5	U		
CARBON DISULFIDE	0.5	U		0.5	U		0.5	U		
CARBON TETRACHLORIDE	0.5	U		0.5	U		0.5	U		
CHLOROBENZENE	0.5	U		0.5	U		0.5	U		
CHLORODIBROMOMETHANE	0.5	U		0.5	U		0.5	U		
CHLOROETHANE	0.5	U		0.5	U		0.5	U		
CHLOROFORM	0.5	U		0.5	U		0.5	U		
CHLOROMETHANE	0.5	U		0.5	U		0.5	U		
CIS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		
CIS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		
CYCLOHEXANE	0.5	U		0.5	U		0.5	U		
DICHLORODIFLUOROMETHANE	0.5	U		0.5	U		0.5	U		
ETHYLBENZENE	0.5	U		0.5	U		0.5	U		
ISOPROPYLBENZENE	0.5	U		0.5	U		0.5	U		



PROJ_NO: 00622 SDG: D1396 FRACTION: OV MEDIA: WATER	NSAMPLE	BP-VPB132-GW-301			BP-VPB132-GW-321			BP-VPB132-GW-341			BP-VPB132-GW-361		
	LAB_ID	D1396-02			D1396-03			D1396-04			D1396-05		
	SAMP_DATE	1/30/2012			1/30/2012			1/31/2012			1/31/2012		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	1	U		1	U		1	U		1	UR	Q	
METHYL ACETATE	0.5	U		0.5	U		0.5	U		0.5	UR	CQ	
METHYL CYCLOHEXANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
METHYL TERT-BUTYL ETHER	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
METHYLENE CHLORIDE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
O-XYLENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
STYRENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
TETRACHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
TOLUENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
TRANS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
TRANS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
TRICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
TRICHLOROFLUOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	
VINYL CHLORIDE	0.5	U		0.5	U		0.5	U		0.5	UR	Q	

PROJ_NO: 00622	NSAMPLE	BP-VPB132-GW-381			BP-VPB132-GW-401			BP-VPB132-GW-421			BP-VPB132-GW-441		
SDG: D1396	LAB_ID	D1396-06			D1396-07			D1396-08			D1396-09		
FRACTION: OV	SAMP_DATE	1/31/2012			2/1/2012			2/1/2012			2/1/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	1	U		1	U		1	U		1	U		
METHYL ACETATE	0.5	U		0.5	U		0.5	UJ	C	0.5	UJ	C	
METHYL CYCLOHEXANE	0.5	U		0.5	U		0.5	U		0.5	U		
METHYL TERT-BUTYL ETHER	0.5	U		0.5	U		0.5	U		0.5	U		
METHYLENE CHLORIDE	0.5	U		0.5	U		0.5	U		0.5	U		
O-XYLENE	0.5	U		0.5	U		0.5	U		0.5	U		
STYRENE	0.5	U		0.5	U		0.5	U		0.5	U		
TETRACHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
TOLUENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRANS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRANS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRICHLOROFLUOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
VINYL CHLORIDE	0.5	U		0.5	U		0.5	U		0.5	U		

<b>PROJ_NO: 00622</b> <b>SDG: D1396</b> <b>FRACTION: OV</b> <b>MEDIA: WATER</b>	NSAMPLE	BP-VPB132-GW-481			BP-VPB132-GW-501			BP-VPB-TB-013012-SJC		
	LAB_ID	D1396-11			D1396-12			D1396-01		
	SAMP_DATE	2/2/2012			2/2/2012			1/30/2012		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
DUP_OF										
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	1	U		1	U		1	U		
METHYL ACETATE	0.5	U		0.5	U		0.5	U		
METHYL CYCLOHEXANE	0.5	U		0.5	U		0.5	U		
METHYL TERT-BUTYL ETHER	0.5	U		0.5	U		0.5	U		
METHYLENE CHLORIDE	0.5	U		0.5	U		0.5	U		
O-XYLENE	0.5	U		0.5	U		0.5	U		
STYRENE	0.5	U		0.5	U		0.5	U		
TETRACHLOROETHENE	0.5	U		0.5	U		0.5	U		
TOLUENE	0.5	U		0.5	U		0.5	U		
TRANS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		
TRANS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		
TRICHLOROETHENE	0.5	U		0.5	U		0.5	U		
TRICHLOROFLUOROMETHANE	0.5	U		0.5	U		0.5	U		
VINYL CHLORIDE	0.5	U		0.5	U		0.5	U		



**Additional Comments**

Forty-nine (49) analytes were reported for VOCs.

Non-detected sample results were reported to the LOD.

**EXECUTIVE SUMMARY**

**Laboratory Performance Issues:** Sample VOC results were qualified for CCV %D quality control limit non-compliances.

**Other Factors Affecting Data Quality:** None.

The data for these analyses were reviewed with reference to the USEPA SW-846 Method 8260B, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP HW-24 Revision #2 August 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).



TetraTech  
Joseph Kalinyak  
Chemist/Data Validator



TetraTech  
Joseph A. Samchuck  
Data Validation Quality Assurance Officer

**Attachments:**

- Appendix A - Qualified Analytical Results
- Appendix B - Results as Reported by the Laboratory
- Appendix C - Region II Data Validation Forms
- Appendix D - Support Documentation

**Appendix A**

Qualified Analytical Results

### **Value Qualifier Key (Val Qual)**

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

### **DATA QUALIFICATION CODE (QUAL CODE)**

#### **Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times$  IDL for inorganics and  $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e. chromatography, interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $>40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $<30\%$
- Z = Uncertainty at 2 sigma deviation is less than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00622	NSAMPLE	BP-VPB132-GW-521			BP-VPB132-GW-541			BP-VPB132-GW-561			BP-VPB132-GW-581		
SDG: D1437	LAB_ID	D1437-02			D1437-03			D1437-04			D1437-05		
FRACTION: OV	SAMP_DATE	2/3/2012			2/6/2012			2/6/2012			2/7/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,1,2,2-TETRACHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,1,2-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,1-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,1-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2,4-TRICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2-DIBROMOETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,2-DICHLOROPROPANE	0.5	U		0.5	U		0.5	U		0.5	U		
1,3-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
1,4-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
2-BUTANONE	2.5	U		2.5	U		2.5	U		2.5	UJ	C	
2-HEXANONE	2.5	U		2.5	U		2.5	U		2.5	U		
4-METHYL-2-PENTANONE	2.5	U		2.5	U		2.5	U		2.5	U		
ACETONE	2.5	U		2.5	U		13			2.5	UJ	C	
BENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
BROMODICHLOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
BROMOFORM	0.5	U		0.5	U		0.5	U		0.5	U		
BROMOMETHANE	0.5	U		0.5	U		0.5	U		0.5	UJ	C	
CARBON DISULFIDE	0.5	U		0.5	U		0.5	U		0.5	U		
CARBON TETRACHLORIDE	0.5	U		0.5	U		0.5	U		0.5	U		
CHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
CHLORODIBROMOMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
CHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	UJ	C	
CHLOROFORM	0.5	U		0.5	U		0.5	U		0.5	U		
CHLOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
CIS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
CIS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		0.5	U		
CYCLOHEXANE	0.5	U		0.5	U		0.5	U		0.5	U		
DICHLORODIFLUOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
ETHYLBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
ISOPROPYLBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		



<b>PROJ_NO: 00622</b> <b>SDG: D1437</b> <b>FRACTION: OV</b> <b>MEDIA: WATER</b>	NSAMPLE	BP-VPB132-GW-601			BP-VPB-TB-020312-SJC		
	LAB_ID	D1437-06			D1437-01		
	SAMP_DATE	2/7/2012			2/3/2012		
	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	U		0.5	U		
1,1,2,2-TETRACHLOROETHANE	0.5	U		0.5	U		
1,1,2-TRICHLOROETHANE	0.5	U		0.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		0.5	U		
1,1-DICHLOROETHANE	0.5	U		0.5	U		
1,1-DICHLOROETHENE	0.5	U		0.5	U		
1,2,4-TRICHLOROBENZENE	0.5	U		0.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		0.5	U		
1,2-DIBROMOETHANE	0.5	U		0.5	U		
1,2-DICHLOROBENZENE	0.5	U		0.5	U		
1,2-DICHLOROETHANE	0.5	U		0.5	U		
1,2-DICHLOROPROPANE	0.5	U		0.5	U		
1,3-DICHLOROBENZENE	0.5	U		0.5	U		
1,4-DICHLOROBENZENE	0.5	U		0.5	U		
2-BUTANONE	2.5	UJ	C	2.5	U		
2-HEXANONE	2.5	U		2.5	U		
4-METHYL-2-PENTANONE	2.5	U		2.5	U		
ACETONE	2.5	UJ	C	2.5	U		
BENZENE	0.5	U		0.5	U		
BROMODICHLOROMETHANE	0.5	U		0.5	U		
BROMOFORM	0.5	U		0.5	U		
BROMOMETHANE	0.5	UJ	C	0.5	U		
CARBON DISULFIDE	0.5	U		0.5	U		
CARBON TETRACHLORIDE	0.5	U		0.5	U		
CHLOROBENZENE	0.5	U		0.5	U		
CHLORODIBROMOMETHANE	0.5	U		0.5	U		
CHLOROETHANE	0.5	UJ	C	0.5	U		
CHLOROFORM	0.5	U		0.5	U		
CHLOROMETHANE	0.5	U		0.5	U		
CIS-1,2-DICHLOROETHENE	0.5	U		0.5	U		
CIS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		
CYCLOHEXANE	0.5	U		0.5	U		
DICHLORODIFLUOROMETHANE	0.5	U		0.5	U		
ETHYLBENZENE	0.5	U		0.5	U		
ISOPROPYLBENZENE	0.5	U		0.5	U		

PROJ_NO: 00622 SDG: D1437 FRACTION: OV MEDIA: WATER	NSAMPLE	BP-VPB132-GW-521			BP-VPB132-GW-541			BP-VPB132-GW-561			BP-VPB132-GW-581		
	LAB_ID	D1437-02			D1437-03			D1437-04			D1437-05		
	SAMP_DATE	2/3/2012			2/6/2012			2/6/2012			2/7/2012		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	1	U		1	U		1	U		1	U		
METHYL ACETATE	0.5	U		0.5	U		0.5	U		0.5	UJ	C	
METHYL CYCLOHEXANE	0.5	U		0.5	U		0.5	U		0.5	U		
METHYL TERT-BUTYL ETHER	0.5	U		0.5	U		0.5	U		0.5	U		
METHYLENE CHLORIDE	0.5	U		0.5	U		0.5	U		0.5	U		
O-XYLENE	0.5	U		0.5	U		0.5	U		0.5	U		
STYRENE	0.5	U		0.5	U		0.5	U		0.5	U		
TETRACHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
TOLUENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRANS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRANS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRICHLOROFLUOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
VINYL CHLORIDE	0.5	U		0.5	U		0.5	U		0.5	U		

PROJ_NO: 00622	NSAMPLE	BP-VPB132-GW-601			BP-VPB-TB-020312-SJC		
SDG: D1437	LAB_ID	D1437-06			D1437-01		
FRACTION: OV	SAMP_DATE	2/7/2012			2/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	1	U		1	U		
METHYL ACETATE	0.5	UJ	C	0.5	U		
METHYL CYCLOHEXANE	0.5	U		0.5	U		
METHYL TERT-BUTYL ETHER	0.5	U		0.5	U		
METHYLENE CHLORIDE	0.5	U		0.5	U		
O-XYLENE	0.5	U		0.5	U		
STYRENE	0.5	U		0.5	U		
TETRACHLOROETHENE	0.5	U		0.5	U		
TOLUENE	0.5	U		0.5	U		
TRANS-1,2-DICHLOROETHENE	0.5	U		0.5	U		
TRANS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		
TRICHLOROETHENE	0.5	U		0.5	U		
TRICHLOROFLUOROMETHANE	0.5	U		0.5	U		
VINYL CHLORIDE	0.5	U		0.5	U		



**VOC**

The continuing calibration verification (CCV) percent differences (%D) was greater than the 20% quality control limit for trichlorofluoromethane for instrument MSVOA\_F on 02/14/12 @ 13:25.

**Affected samples:** re-analysis of samples BP-VPB132-GW-681, BP-VPB132-GW-721, and BP-VPB132-GW-741

**Action:** The non-detected trichlorofluoromethane results for the reported sample re-analyzes were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for tetrachloroethene for instrument MSVOA\_R on 02/14/12 @ 22:56.

**Affected samples:** MS and MSD

**Action:** No validation action was necessary. No samples were affected.

The surrogate (system monitoring compound) and internal standard recoveries %Rs were less than the quality control limit for samples listed below.

Sample	Surrogate(s)	Internal Standard
BP-VPB132-GW-681	BFB	1,4-dichlorobenzene-d4 – IS4
BP-VPB132-GW-681RE	BFB	IS4
BP-VPB132-GW-721	BFB	IS4
BP-VPB132-GW-721RE	BFB	IS4
BP-VPB132-GW-741	BFB	IS4
BP-VPB132-GW-741RE	BFB	IS4

**Actions:** The re-analyses results of the samples were reported due to improved internal standard recoveries.

Positive results below the limit of quantitation (LOQ) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

**Additional Comments**

Forty-nine (49) analytes were reported for VOCs.

Non-detected sample results were reported to the LOD.

**EXECUTIVE SUMMARY**

**Laboratory Performance Issues:** Sample VOC results were qualified for CCV %D quality control limit non-compliances.


**Other Factors Affecting Data Quality:** Positive results below the Limit of Detection (LOD) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA Region II Hazardous Waste

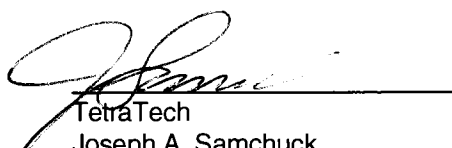
TO: D. BRAYACK  
SDG: D1473

PAGE: 3

The data for these analyses were reviewed with reference to the USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP #HW-24 Revision #2 August 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).



TetraTech  
Joseph Kalinyak  
Chemist/Data Validator



TetraTech  
Joseph A. Samchuck  
Data Validation Quality Assurance Officer

Attachments:

- Appendix A - Qualified Analytical Results
- Appendix B - Results as Reported by the Laboratory
- Appendix C - Region II Data Validation Forms
- Appendix D - Support Documentation

**Appendix A**

Qualified Analytical Results

### **Value Qualifier Key (Val Qual)**

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

### **DATA QUALIFICATION CODE (QUAL CODE)**

#### **Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times$  IDL for inorganics and  $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $>40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $<30\%$
- Z = Uncertainty at 2 sigma deviation is less than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed



PROJ_NO: 00622 SDG: D1473 FRACTION: OV MEDIA: WATER	NSAMPLE	BP-VPB132-GW-641			BP-VPB132-GW-701			BP-VPB-TB-020812-SJC		
	LAB_ID	D1473-02			D1473-04			D1473-01		
	SAMP_DATE	2/8/2012			2/9/2012			2/8/2012		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		
1,1,2,2-TETRACHLOROETHANE	0.5	U		0.5	U		0.5	U		
1,1,2-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		0.5	U		0.5	U		
1,1-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		
1,1-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		
1,2,4-TRICHLOROBENZENE	0.5	U		0.5	U		0.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		0.5	U		0.5	U		
1,2-DIBROMOETHANE	0.5	U		0.5	U		0.5	U		
1,2-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		
1,2-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		
1,2-DICHLOROPROPANE	0.5	U		0.5	U		0.5	U		
1,3-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		
1,4-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		
2-BUTANONE	2.5	U		2.5	U		2.5	U		
2-HEXANONE	2.5	U		2.5	U		2.5	U		
4-METHYL-2-PENTANONE	2.5	U		2.5	U		2.5	U		
ACETONE	5			4.8	J	P	2.5	U		
BENZENE	0.5	U		0.5	U		0.5	U		
BROMODICHLOROMETHANE	0.5	U		0.5	U		0.5	U		
BROMOFORM	0.5	U		0.5	U		0.5	U		
BROMOMETHANE	0.5	U		0.5	U		0.5	U		
CARBON DISULFIDE	0.5	U		0.5	U		0.5	U		
CARBON TETRACHLORIDE	0.5	U		0.5	U		0.5	U		
CHLOROBENZENE	0.5	U		0.5	U		0.5	U		
CHLORODIBROMOMETHANE	0.5	U		0.5	U		0.5	U		
CHLOROETHANE	0.5	U		0.5	U		0.5	U		
CHLOROFORM	0.5	U		0.5	U		0.5	U		
CHLOROMETHANE	0.5	U		0.5	U		0.5	U		
CIS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		
CIS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		
CYCLOHEXANE	0.5	U		0.5	U		0.5	U		
DICHLORODIFLUOROMETHANE	0.5	U		0.5	U		0.5	U		
ETHYLBENZENE	0.5	U		0.5	U		0.5	U		
ISOPROPYLBENZENE	0.5	U		0.5	U		0.5	U		

<b>PROJ_NO: 00622</b> <b>SDG: D1473</b> <b>FRACTION: OV</b> <b>MEDIA: WATER</b>	NSAMPLE	BP-VPB132-GW-641			BP-VPB132-GW-701			BP-VPB-TB-020812-SJC		
	LAB_ID	D1473-02			D1473-04			D1473-01		
	SAMP_DATE	2/8/2012			2/9/2012			2/8/2012		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	1	U		1	U		1	U		
METHYL ACETATE	0.5	U		0.5	U		0.5	U		
METHYL CYCLOHEXANE	0.5	U		0.5	U		0.5	U		
METHYL TERT-BUTYL ETHER	0.5	U		0.5	U		0.5	U		
METHYLENE CHLORIDE	0.5	U		0.5	U		0.5	U		
O-XYLENE	0.5	U		0.5	U		0.5	U		
STYRENE	0.5	U		0.5	U		0.5	U		
TETRACHLOROETHENE	0.5	U		0.5	U		0.5	U		
TOLUENE	0.5	U		0.5	U		0.5	U		
TRANS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		
TRANS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		
TRICHLOROETHENE	0.5	U		0.5	U		0.5	U		
TRICHLOROFLUOROMETHANE	0.5	U		0.5	U		0.5	U		
VINYL CHLORIDE	0.5	U		0.5	U		0.5	U		

PROJ_NO: 00622 SDG: D1473 FRACTION: OV MEDIA: SOIL	NSAMPLE	BP-VPB132-GW-681RE			BP-VPB132-GW-721RE			BP-VPB132-GW-741RE		
	LAB_ID	D1473-03RE			D1473-05RE			D1473-06RE		
	SAMP_DATE	2/8/2012			2/9/2012			2/9/2012		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	2.5	U		2.45	U		2.55	U		
1,1,2,2-TETRACHLOROETHANE	2.5	U		2.45	U		2.55	U		
1,1,2-TRICHLOROETHANE	2.5	U		2.45	U		2.55	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	2.5	U		2.45	U		2.55	U		
1,1-DICHLOROETHANE	2.5	U		2.45	U		2.55	U		
1,1-DICHLOROETHENE	2.5	U		2.45	U		2.55	U		
1,2,4-TRICHLOROBENZENE	2.5	U		2.45	U		2.55	U		
1,2-DIBROMO-3-CHLOROPROPANE	2.5	U		2.45	U		2.55	U		
1,2-DIBROMOETHANE	2.5	U		2.45	U		2.55	U		
1,2-DICHLOROBENZENE	2.5	U		2.45	U		2.55	U		
1,2-DICHLOROETHANE	2.5	U		2.45	U		2.55	U		
1,2-DICHLOROPROPANE	2.5	U		2.45	U		2.55	U		
1,3-DICHLOROBENZENE	2.5	U		2.45	U		2.55	U		
1,4-DICHLOROBENZENE	2.5	U		2.45	U		2.55	U		
2-BUTANONE	12.5	U		12.5	U		12.5	U		
2-HEXANONE	12.5	U		12.5	U		12.5	U		
4-METHYL-2-PENTANONE	12.5	U		12.5	U		12.5	U		
ACETONE	19	J	P	17	J	P	25	J	P	
BENZENE	2.5	U		2.45	U		2.55	U		
BROMODICHLOROMETHANE	2.5	U		2.45	U		2.55	U		
BROMOFORM	2.5	U		2.45	U		2.55	U		
BROMOMETHANE	2.5	U		2.45	U		2.55	U		
CARBON DISULFIDE	2.5	U		2.45	U		2.55	U		
CARBON TETRACHLORIDE	2.5	U		2.45	U		2.55	U		
CHLOROBENZENE	2.5	U		2.45	U		2.55	U		
CHLORODIBROMOMETHANE	2.5	U		2.45	U		2.55	U		
CHLOROETHANE	2.5	U		2.45	U		2.55	U		
CHLOROFORM	2.5	U		2.45	U		2.55	U		
CHLOROMETHANE	2.5	U		2.45	U		2.55	U		
CIS-1,2-DICHLOROETHENE	2.5	U		2.45	U		2.55	U		
CIS-1,3-DICHLOROPROPENE	2.5	U		2.45	U		2.55	U		
CYCLOHEXANE	2.5	U		2.45	U		2.55	U		
DICHLORODIFLUOROMETHANE	2.5	U		2.45	U		2.55	U		
ETHYLBENZENE	2.5	U		2.45	U		2.55	U		
ISOPROPYLBENZENE	2.5	U		2.45	U		2.55	U		

<b>PROJ_NO: 00622</b> <b>SDG: D1473</b> <b>FRACTION: OV</b> <b>MEDIA: SOIL</b>	NSAMPLE	BP-VPB132-GW-681RE			BP-VPB132-GW-721RE			BP-VPB132-GW-741RE		
	LAB_ID	D1473-03RE			D1473-05RE			D1473-06RE		
	SAMP_DATE	2/8/2012			2/9/2012			2/9/2012		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	5	U		4.95	U		5	U		
METHYL ACETATE	2.5	U		2.45	U		2.55	U		
METHYL CYCLOHEXANE	2.5	U		2.45	U		2.55	U		
METHYL TERT-BUTYL ETHER	2.5	U		2.45	U		2.55	U		
METHYLENE CHLORIDE	2.5	U		2.45	U		2.55	U		
O-XYLENE	2.5	U		2.45	U		2.55	U		
STYRENE	2.5	U		2.45	U		2.55	U		
TETRACHLOROETHENE	2.5	U		2.45	U		2.55	U		
TOLUENE	2.5	U		2.45	U		2.55	U		
TRANS-1,2-DICHLOROETHENE	2.5	U		2.45	U		2.55	U		
TRANS-1,3-DICHLOROPROPENE	2.5	U		2.45	U		2.55	U		
TRICHLOROETHENE	2.5	U		2.45	U		2.55	U		
TRICHLOROFUOROMETHANE	2.5	UJ	C	2.45	UJ	C	2.55	UJ	C	
VINYL CHLORIDE	2.5	U		2.45	U		2.55	U		



Tetra Tech, Inc.

## INTERNAL CORRESPONDENCE

**TO:** D. BRAYACK **DATE:** MARCH 23, 2012  
**FROM:** MICHELLE L. ALLEN **COPIES:** DV FILE  
**SUBJECT:** ORGANIC & INORGANIC DATA VALIDATION – VOC  
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), BETHPAGE  
CTO WE062  
SAMPLE DELIVERY GROUP (SDG) D1516

**SAMPLES:** 5/Aqueous/VOC

BP-VPB132-GW-761      BP-VPB132-GW-781      BP-VPB132-GW-821  
BP-VPB132-GW-841      BP-VPB-TB-021312

### Overview

The sample set for NWIRP Bethpage SDG D1516 consisted of five (5) aqueous environmental samples and one (1) trip blank. All five (5) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). No field duplicate sample pair was associated with this sample data group (SDG).

The samples were collected by Tetra Tech, Inc. on February 13 and 14, 2012 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Method SW-846 8260B analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

- \*      • Data completeness
- \*      • Hold times
- \*      • GC/MS System Tuning and Performance
- Initial/continuing calibrations
- \*      • Laboratory Method and Field Blank Results
- \*      • Surrogate Spike Recoveries
- \*      • Internal Standard Results
- Laboratory Control Sample/Laboratory Control Sample Duplicate Results
- \*      • Matrix Spike/Matrix Spike Duplicate Sample Results
- \*      • Compound Identification
- \*      • Compound Quantitation
- \*      • Detection Limits

The symbol (\*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

### Volatiles (VOC)

Due to the nature of the matrices, the environmental groundwater samples in this SDG were analyzed as soils. The sample results were reported in µg/Kg based on the wet weight of the sample.

The continuing calibration performed on instrument MSVOA\_F on 02/15/12 @ 12:10 had a Percent Difference (%D) for trichlorofluoromethane and acetone above the 20% quality control limit. The positive and non-detected results reported for this compound in the affected samples, BP-VPB132-GW-761, BP-

VPB132-GW-781, and BP-VPB132-GW-821, were qualified as estimated, (J) and (UJ), respectively.

The continuing calibration %D on instrument MSVOA\_F on 02/16/12 @ 12:18 for trichlorofluoromethane was greater than the 20% quality control limit. Sample BP-VPB132-GW-841 was affected. The non-detected result reported for this compound in the affected sample was qualified as estimated, (UJ).

Positive results reported below the LOQ but above the Method Detection Limit (MDL) were qualified as estimated, (J).

#### **Additional Comments**

The Laboratory Control Sample (LCS), BSF0216S1, had a %R for methylene chloride above the upper quality control limit. No action necessary in the affected samples because no positive results were reported for this compound.

The LCS, BSG0216W1, had a %R for dichlorodifluoromethane above the upper quality control limit. In addition, the Relative Percent Difference (RPD) for 1,2-dichloro-3-chloropropane exceeded the 20% quality control criterion. No action necessary because the Laboratory Control Sample Duplicate (LCSD) %R for dichlorodifluoromethane was acceptable, the LCS/LCSD %Rs for 1,2-chloro-3-chloropropane were within the quality control limits, and no positive results were reported for these compounds in the affected sample.

Non-detected results are reported to the Limit of Detection (LOD).

#### **EXECUTIVE SUMMARY**

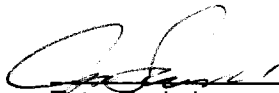
**Laboratory Performance Issues:** Continuing calibration %Ds exceeded the 20% quality control limit. LCS and LCS/LCSDs had high %Rs and a RPD for some target compounds.

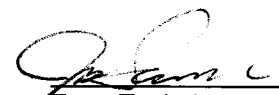
**Other Factors Affecting Data Quality:** Positive results reported below the LOQ but above the MDL were qualified as estimated.

TO: D. BRAYACK  
SDG: D1516

PAGE: 3

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (August 2008), EPA Method SW-846 8260C analytical and reporting protocols, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

  
\_\_\_\_\_  
Tetra Tech, Inc.  
Michelle L. Allen  
Chemist/Data Validator

  
\_\_\_\_\_  
Tetra Tech, Inc.  
Joseph A. Samchuck  
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
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**Appendix A**

Qualified Analytical Results



**Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times \text{IDL}$  for inorganics and  $< \text{CRQL}$  for organics)
- Q = Other problems (can encompass a number of issues; i.e. chromatography, interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $> 40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $< 30\%$
- Z = Uncertainty at 2 sigma deviation is less than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02751 SDG: D1516 FRACTION: OV MEDIA: SOIL	NSAMPLE	BP-VPB132-GW-761			BP-VPB132-GW-781			BP-VPB132-GW-821			BP-VPB132-GW-841		
	LAB_ID	D1516-02			D1516-03			D1516-04			D1516-05		
	SAMP_DATE	2/13/2012			2/13/2012			2/14/2012			2/14/2012		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
1,1,2,2-TETRACHLOROETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
1,1,2-TRICHLOROETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
1,1-DICHLOROETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
1,1-DICHLOROETHENE	2.45	U		2.45	U		2.5	U		2.5	U		
1,2,4-TRICHLOROBENZENE	2.45	U		2.45	U		2.5	U		2.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	2.45	U		2.45	U		2.5	U		2.5	U		
1,2-DIBROMOETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
1,2-DICHLOROBENZENE	2.45	U		2.45	U		2.5	U		2.5	U		
1,2-DICHLOROETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
1,2-DICHLOROPROPANE	2.45	U		2.45	U		2.5	U		2.5	U		
1,3-DICHLOROBENZENE	2.45	U		2.45	U		2.5	U		2.5	U		
1,4-DICHLOROBENZENE	2.45	U		2.45	U		2.5	U		2.5	U		
2-BUTANONE	12.5	U		12.5	U		12.5	U		12.5	U		
2-HEXANONE	12.5	U		12.5	U		12.5	U		12.5	U		
4-METHYL-2-PENTANONE	12.5	U		12.5	U		12.5	U		12.5	U		
ACETONE	13	J	CP	20	J	CP	15	J	CP	28			
BENZENE	2.45	U		2.45	U		2.5	U		2.5	U		
BROMODICHLOROMETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
BROMOFORM	2.45	U		2.45	U		2.5	U		2.5	U		
BROMOMETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
CARBON DISULFIDE	2.45	U		2.45	U		2.5	U		2.5	U		
CARBON TETRACHLORIDE	2.45	U		2.45	U		2.5	U		2.5	U		
CHLOROBENZENE	2.45	U		2.45	U		2.5	U		2.5	U		
CHLORODIBROMOMETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
CHLOROETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
CHLOROFORM	2.45	U		2.45	U		2.5	U		2.5	U		
CHLOROMETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
CIS-1,2-DICHLOROETHENE	2.45	U		2.45	U		2.5	U		2.5	U		
CIS-1,3-DICHLOROPROPENE	2.45	U		2.45	U		2.5	U		2.5	U		
CYCLOHEXANE	2.45	U		2.45	U		2.5	U		2.5	U		
DICHLORODIFLUOROMETHANE	2.45	U		2.45	U		2.5	U		2.5	U		
ETHYLBENZENE	2.45	U		2.45	U		2.5	U		2.5	U		
ISOPROPYLBENZENE	2.45	U		2.45	U		2.5	U		2.5	U		

PROJ_NO: 02751 SDG: D1516 FRACTION: OV MEDIA: SOIL	NSAMPLE	BP-VPB132-GW-761			BP-VPB132-GW-781			BP-VPB132-GW-821			BP-VPB132-GW-841		
	LAB_ID	D1516-02			D1516-03			D1516-04			D1516-05		
	SAMP_DATE	2/13/2012			2/13/2012			2/14/2012			2/14/2012		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	4.95	U		4.95	U		4.95	U		4.95	U		
METHYL ACETATE	2.45	U		2.45	U		2.5	U		2.5	U		
METHYL CYCLOHEXANE	2.45	U		2.45	U		2.5	U		2.5	U		
METHYL TERT-BUTYL ETHER	2.45	U		2.45	U		2.5	U		2.5	U		
METHYLENE CHLORIDE	2.45	U		2.45	U		2.5	U		5.1			
O-XYLENE	2.45	U		2.45	U		2.5	U		2.5	U		
STYRENE	2.45	U		2.45	U		2.5	U		2.5	U		
TETRACHLOROETHENE	2.45	U		2.45	U		2.5	U		2.5	U		
TOLUENE	2.45	U		2.45	U		2.5	U		2.5	U		
TRANS-1,2-DICHLOROETHENE	2.45	U		2.45	U		2.5	U		2.5	U		
TRANS-1,3-DICHLOROPROPENE	2.45	U		2.45	U		2.5	U		2.5	U		
TRICHLOROETHENE	2.45	U		2.45	U		2.5	U		2.5	U		
TRICHLOROFLUOROMETHANE	2.45	UJ	C	2.45	UJ	C	2.5	UJ	C	2.5	UJ	C	
VINYL CHLORIDE	2.45	U		2.45	U		2.5	U		2.5	U		

<b>PROJ_NO: 02751</b> <b>SDG: D1516</b> <b>FRACTION: OV</b> <b>MEDIA: WATER</b>	NSAMPLE	BP-VPB-TB-021312		
	LAB_ID	D1516-01		
	SAMP_DATE	2/13/2012		
	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	100.0		
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	U		
1,1,2,2-TETRACHLOROETHANE	0.5	U		
1,1,2-TRICHLOROETHANE	0.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		
1,1-DICHLOROETHANE	0.5	U		
1,1-DICHLOROETHENE	0.5	U		
1,2,4-TRICHLOROBENZENE	0.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		
1,2-DIBROMOETHANE	0.5	U		
1,2-DICHLOROBENZENE	0.5	U		
1,2-DICHLOROETHANE	0.5	U		
1,2-DICHLOROPROPANE	0.5	U		
1,3-DICHLOROBENZENE	0.5	U		
1,4-DICHLOROBENZENE	0.5	U		
2-BUTANONE	2.5	U		
2-HEXANONE	2.5	U		
4-METHYL-2-PENTANONE	2.5	U		
ACETONE	2.5	U		
BENZENE	0.5	U		
BROMODICHLOROMETHANE	0.5	U		
BROMOFORM	0.5	U		
BROMOMETHANE	0.5	U		
CARBON DISULFIDE	0.5	U		
CARBON TETRACHLORIDE	0.5	U		
CHLOROBENZENE	0.5	U		
CHLORODIBROMOMETHANE	0.5	U		
CHLOROETHANE	0.5	U		
CHLOROFORM	0.5	U		
CHLOROMETHANE	0.5	U		
CIS-1,2-DICHLOROETHENE	0.5	U		
CIS-1,3-DICHLOROPROPENE	0.5	U		
CYCLOHEXANE	0.5	U		
DICHLORODIFLUOROMETHANE	0.5	U		
ETHYLBENZENE	0.5	U		
ISOPROPYLBENZENE	0.5	U		

<b>PROJ_NO: 02751</b> <b>SDG: D1516</b> <b>FRACTION: OV</b> <b>MEDIA: WATER</b>	NSAMPLE	BP-VPB-TB-021312		
	LAB_ID	D1516-01		
	SAMP_DATE	2/13/2012		
	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	100.0		
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
M+P-XYLENES	1	U		
METHYL ACETATE	0.5	U		
METHYL CYCLOHEXANE	0.5	U		
METHYL TERT-BUTYL ETHER	0.5	U		
METHYLENE CHLORIDE	0.5	U		
O-XYLENE	0.5	U		
STYRENE	0.5	U		
TETRACHLOROETHENE	0.5	U		
TOLUENE	0.5	U		
TRANS-1,2-DICHLOROETHENE	0.5	U		
TRANS-1,3-DICHLOROPROPENE	0.5	U		
TRICHLOROETHENE	0.5	U		
TRICHLOROFLUOROMETHANE	0.5	U		
VINYL CHLORIDE	0.5	U		



**TO:** D. BRAYACK **DATE:** MARCH 21, 2012  
**FROM:** TERRI L. SOLOMON **COPIES:** DV FILE  
**SUBJECT:** ORGANIC DATA VALIDATION – VOC  
NWIRP BETHPAGE CTO WE62  
SAMPLE DELIVERY GROUP (SDG) – D1547  
**SAMPLES:** 4/Aqueous/VOC

BP-VPB132-DM-850 BP-VPB132-GW-861  
BP-VPB132-SW-021512 BP-VPB-TB-021512  
1/Soil/TOC  
BP-VP132-SB-891

Overview

The sample set for NWIRP Bethpage, CTO WE62, SDG D1547 consists of two (2) environmental aqueous samples, one (1) source water sample and one (1) trip blank analyzed for volatile organic compounds (VOCs). One soil sample was analyzed for Total Organic Carbon (TOC). There was no field duplicate contained in this SDG.

The samples were collected on February 15 and 16, 2012 by Tetra Tech and analyzed by Chemtech. VOC analyses were conducted in accordance with EPA Method SW-846 8260B analytical and reporting protocol. TOC analysis was conducted via SW-846 9060. The data contained in this SDG were validated with regard to the following parameters:

- \* • Data completeness
- \* • Holding times
- \* • GC/MS Tuning
- Initial/continuing calibrations
- \* • Laboratory Method Blank Results
- \* • Surrogate Recoveries
- \* • Laboratory Control Sample Recoveries
- \* • Internal Standard Recoveries
- \* • Compound Quantitation
- \* • Compound Identification
- \* • Detection Limits

The symbol (\*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

VOC

The initial calibration relative standard deviation (%RSD) for methylene chloride was greater than the 15% quality control limit on 02/08/2012 on instrument MSVOA F. The nondetected results for methylene chloride were qualified as estimated "UJ" in the affected samples BP-VPB132-DM-850 and BP-VPB132-GW-861.

**MEMO TO: D. BRAYACK - PAGE 2**  
**DATE: MARCH 21, 2012**

The continuing calibration percent differences and/or percent drifts were greater than the 20% quality control limit for chloroethane, trichlorofluoromethane, methylene chloride, carbon tetrachloride and 1,1,1-trichloroethane on 02/17/2012 at 14:19 on instrument MSVOA F. The nondetected results for chloroethane, trichlorofluoromethane, methylene chloride, carbon tetrachloride and 1,1,1-trichloroethane were qualified as estimated "UJ" in the affected samples BP-VPB132-DM-850 and BP-VPB132-GW-861.

The initial calibration relative standard deviations (%RSDs) for methyl acetate, methylene chloride, cyclohexane, 2-butanone, m+p-xylenes, and 1,3-dichlorobenzene were greater than the 15% quality control limit on 02/10/2012 on instrument MSVOA R. The nondetected results for methyl acetate, methylene chloride, cyclohexane, 2-butanone, m+p-xylenes, and 1,3-dichlorobenzene were qualified as estimated "UJ" in the affected samples BP-VPB132-SW-021512 and BP-VPB-TB-021512.

The continuing calibration percent differences and/or percent drifts were greater than the 20% quality control limit for methylene chloride, cyclohexane and bromoform on 02/17/2012 at 13:58 on instrument MSVOA R. The positive and nondetected results for methylene chloride, cyclohexane and bromoform were qualified as estimated "J" and "UJ" in the affected samples BP-VPB132-SW-021512 and BP-VPB-TB-021512.

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

#### Additional Comments

Groundwater samples BP-VPB132-DM-850 and BP-VPB132-GW-861 were analyzed as soil samples due to the amount of sediment in the samples. The sample results were reported in units of ug/kg on a wet weight basis.

Nondetected results are reported to the limit of detection (LOD).

#### EXECUTIVE SUMMARY

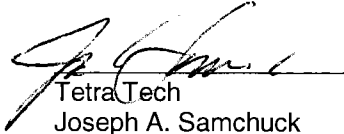
**Laboratory Performance Issues:** Several initial %RSDs and continuing calibration %Ds / % drifts for several compounds exceeded the quality control limits.

**Other Factors Affecting Data Quality:** Positive results below the RL and above the detection limit were qualified as estimated.

The data for these analyses were reviewed with reference to SOP # HW-24 Revision #2, August 2008, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846/8260B, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009. The text of this report has been formulated to address only those problem areas affecting data quality.

  
Tetra Tech  
Terri L. Solomon  
Chemist/Data Validator

**MEMO TO: D. BRAYACK - PAGE 3**  
**DATE: MARCH 21, 2012**



Tetra Tech  
Joseph A. Samchuck  
Data Validation Quality Assurance Officer

**Attachments:**

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation



**Appendix A**

Qualified Analytical Results

**Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times$  IDL for inorganics and  $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $>40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $<30\%$
- Z = Uncertainty at 2 sigma deviation is less than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed

<b>PROJ_NO: 02751</b> <b>SDG: D1547</b> <b>FRACTION: OV</b> <b>MEDIA: SOIL</b>	NSAMPLE	BP-VPB132-DM-850			BP-VPB132-GW-861		
	LAB_ID	D1547-03			D1547-04		
	SAMP_DATE	2/15/2012			2/15/2012		
	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	2.45	UJ	C	2.5	UJ	C	
1,1,2,2-TETRACHLOROETHANE	2.45	U		2.5	U		
1,1,2-TRICHLOROETHANE	2.45	U		2.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	2.45	U		2.5	U		
1,1-DICHLOROETHANE	2.45	U		2.5	U		
1,1-DICHLOROETHENE	2.45	U		2.5	U		
1,2,4-TRICHLOROBENZENE	2.45	U		2.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	2.45	U		2.5	U		
1,2-DIBROMOETHANE	2.45	U		2.5	U		
1,2-DICHLOROBENZENE	2.45	U		2.5	U		
1,2-DICHLOROETHANE	2.45	U		2.5	U		
1,2-DICHLOROPROPANE	2.45	U		2.5	U		
1,3-DICHLOROBENZENE	2.45	U		2.5	U		
1,4-DICHLOROBENZENE	2.45	U		2.5	U		
2-BUTANONE	12.5	U		12.5	U		
2-HEXANONE	12.5	U		12.5	U		
4-METHYL-2-PENTANONE	12.5	U		12.5	U		
ACETONE	29			37			
BENZENE	2.45	U		2.5	U		
BROMODICHLOROMETHANE	2.45	U		2.5	U		
BROMOFORM	2.45	U		2.5	U		
BROMOMETHANE	2.45	U		2.5	U		
CARBON DISULFIDE	2.45	U		2.5	U		
CARBON TETRACHLORIDE	2.45	UJ	C	2.5	UJ	C	
CHLOROBENZENE	2.45	U		2.5	U		
CHLORODIBROMOMETHANE	2.45	U		2.5	U		
CHLOROETHANE	2.45	UJ	C	2.5	UJ	C	
CHLOROFORM	2.45	U		2.5	U		
CHLOROMETHANE	2.45	U		2.5	U		
CIS-1,2-DICHLOROETHENE	2.45	U		2.5	U		
CIS-1,3-DICHLOROPROPENE	2.45	U		2.5	U		
CYCLOHEXANE	2.45	U		2.5	U		
DICHLORODIFLUOROMETHANE	2.45	U		2.5	U		
ETHYLBENZENE	2.45	U		2.5	U		
ISOPROPYLBENZENE	2.45	U		2.5	U		

<b>PROJ_NO: 02751</b> <b>SDG: D1547</b> <b>FRACTION: OV</b> <b>MEDIA: SOIL</b>	NSAMPLE	BP-VPB132-DM-850			BP-VPB132-GW-861		
	LAB_ID	D1547-03			D1547-04		
	SAMP_DATE	2/15/2012			2/15/2012		
	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	4.95 U			5 U			
METHYL ACETATE	2.45 U			2.5 U			
METHYL CYCLOHEXANE	2.45 U			2.5 U			
METHYL TERT-BUTYL ETHER	2.45 U			2.5 U			
METHYLENE CHLORIDE	2.45 UJ		C	2.5 UJ		C	
O-XYLENE	2.45 U			2.5 U			
STYRENE	2.45 U			2.5 U			
TETRACHLOROETHENE	2.45 U			2.5 U			
TOLUENE	2.45 U			2.5 U			
TRANS-1,2-DICHLOROETHENE	2.45 U			2.5 U			
TRANS-1,3-DICHLOROPROPENE	2.45 U			2.5 U			
TRICHLOROETHENE	2.45 U			2.5 U			
TRICHLOROFLUOROMETHANE	2.45 UJ		C	2.5 UJ		C	
VINYL CHLORIDE	2.45 U			2.5 U			

<b>PROJ_NO: 02751</b> <b>SDG: D1547</b> <b>FRACTION: OV</b> <b>MEDIA: WATER</b>	NSAMPLE	BP-VPB132-SW-021512			BP-VPB-TB-021512		
	LAB_ID	D1547-02			D1547-01		
	SAMP_DATE	2/15/2012			2/15/2012		
	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0		
	DUP_OF						
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	U		0.5	U		
1,1,2,2-TETRACHLOROETHANE	0.5	U		0.5	U		
1,1,2-TRICHLOROETHANE	0.5	U		0.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		0.5	U		
1,1-DICHLOROETHANE	0.5	U		0.5	U		
1,1-DICHLOROETHENE	0.5	U		0.5	U		
1,2,4-TRICHLOROBENZENE	0.5	U		0.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		0.5	U		
1,2-DIBROMOETHANE	0.5	U		0.5	U		
1,2-DICHLOROBENZENE	0.5	U		0.5	U		
1,2-DICHLOROETHANE	0.5	U		0.5	U		
1,2-DICHLOROPROPANE	0.5	U		0.5	U		
1,3-DICHLOROBENZENE	0.5	UJ	C	0.5	UJ	C	
1,4-DICHLOROBENZENE	0.5	U		0.5	U		
2-BUTANONE	2.5	UJ	C	2.5	UJ	C	
2-HEXANONE	2.5	U		2.5	U		
4-METHYL-2-PENTANONE	2.5	U		2.5	U		
ACETONE	2.6	J	P	2.5	U		
BENZENE	0.5	U		0.5	U		
BROMODICHLOROMETHANE	0.98	J	P	0.5	U		
BROMOFORM	1.4	J	C	0.5	UJ	C	
BROMOMETHANE	0.5	U		0.5	U		
CARBON DISULFIDE	0.41	J	P	0.5	U		
CARBON TETRACHLORIDE	0.5	U		0.5	U		
CHLOROBENZENE	0.5	U		0.5	U		
CHLORODIBROMOMETHANE	2			0.5	U		
CHLOROETHANE	0.5	U		0.5	U		
CHLOROFORM	0.5	U		0.5	U		
CHLOROMETHANE	0.5	U		0.5	U		
CIS-1,2-DICHLOROETHENE	0.5	U		0.5	U		
CIS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		
CYCLOHEXANE	0.5	UJ	C	0.5	UJ	C	
DICHLORODIFLUOROMETHANE	0.5	U		0.5	U		
ETHYLBENZENE	0.5	U		0.5	U		
ISOPROPYLBENZENE	0.5	U		0.5	U		

<b>PROJ_NO: 02751</b> <b>SDG: D1547</b> <b>FRACTION: OV</b> <b>MEDIA: WATER</b>	NSAMPLE	BP-VPB132-SW-021512			BP-VPB-TB-021512		
	LAB_ID	D1547-02			D1547-01		
	SAMP_DATE	2/15/2012			2/15/2012		
	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	100.0			100.0		
	DUP_OF						
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
M+P-XYLENES	1	UJ	C	1	UJ	C	
METHYL ACETATE	0.5	UJ	C	0.5	UJ	C	
METHYL CYCLOHEXANE	0.5	U		0.5	U		
METHYL TERT-BUTYL ETHER	0.5	U		0.5	U		
METHYLENE CHLORIDE	0.5	UJ	C	0.5	UJ	C	
O-XYLENE	0.5	U		0.5	U		
STYRENE	0.5	U		0.5	U		
TETRACHLOROETHENE	0.5	U		0.5	U		
TOLUENE	0.5	U		0.5	U		
TRANS-1,2-DICHLOROETHENE	0.5	U		0.5	U		
TRANS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		
TRICHLOROETHENE	0.5	U		0.5	U		
TRICHLOROFLUOROMETHANE	0.5	U		0.5	U		
VINYL CHLORIDE	0.5	U		0.5	U		



The symbol (\*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

### VOC

The initial calibration average relative response factor (RRF) was less than the 0.05 minimum response criterion for 1,4-dioxane for instrument MSVOA\_F on 02/21/12 and all continuing calibration verification (CCV) RRFs.

**Affected sample:** BP-VPB132-GW-942

**Action:** The non-detected 1,4-dioxane result for sample BP-VPB132-GW-942 was qualified rejected, (UR).

The continuing calibration verification (CCV) percent differences (%D) were greater than the 20% quality control limit for 1,4-dioxane, trichlorofluoromethane and 1,2-dibromo-3-chloropropane for instrument MSVOA\_F on 02/23/12 @ 13:10.

**Affected sample:** BP-VPB132-GW-942

**Action:** The non-detected trichlorofluoromethane and 1,2-dibromo-3-chloropropane results were qualified estimated, (UJ). No validation action was necessary for the 1,4-dioxane result as the result was qualified for the RRF quality control limit non-compliance.

The initial calibration average RRF was less than the 0.05 minimum response criterion for 1,4-dioxane for instrument MSVOA\_R on 02/22/12 and all CCV RRFs.

**Affected sample:** BP-VPB-TB-022112

**Action:** The non-detected 1,4-dioxane result for sample BP-VPB-TB-022112 was qualified rejected, (UR).

The CCV %D was greater than the 20% quality control limit for 1,4-dioxane for instrument MSVOA\_R on 02/23/12 @ 11:08.

**Affected sample:** BP-VPB-TB-022112

**Action:** No validation action was necessary for the 1,4-dioxane result as the result was qualified for the RRF quality control limit non-compliance.

Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit.

### TOC

The sample BP-VPB132-SB-971 TOC result exceeded the highest standard calibration level for the TOC calibration. The sample was not re-analyzed. The positive result for the sample was qualified estimated, (J).

### Additional Comments

The VOC matrix spike (MS) percent recoveries (%Rs) were greater than the quality control limit for 1,1,2,2-tetrachloroethane, 1,2-dibromo-3-chloropropane, and 1,4-dioxane and the MS duplicate %R was greater than the quality control limit for 1,2-dibromo-3-chloropropane for a spiked sample not from this SDG.

**Action:** The spiked sample was not a sample from this sample and no validation action was necessary.



TO: D. BRAYACK  
SDG: D1593

PAGE: 3

The sample BP-VPB132-GW-942 had seven (7) tentatively identified compounds (TIC) listed on the Form I. This is noted for informational purposes. No validation action was necessary.

Fifty-two (52) analytes were reported for VOCs.

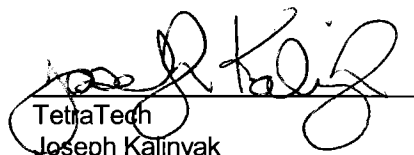
Non-detected sample results were reported to the LOD.

### **EXECUTIVE SUMMARY**

**Laboratory Performance Issues:** Sample 1,4-dioxane non-detected results were rejected for RRF failing to meet the minimum response criterion. Sample non-detected VOC results were qualified for CCV %D quality control limit non-compliances. The sample BP-VPB132-SB-971 positive TOC result was qualified for exceeding the highest calibration level.

**Other Factors Affecting Data Quality:** Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP #HW-24 Revision #2 August 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

  
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**Attachments:**

- Appendix A - Qualified Analytical Results
- Appendix B - Results as Reported by the Laboratory
- Appendix C - Region II Data Validation Forms
- Appendix D - Support Documentation

### **Value Qualifier Key (Val Qual)**

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

### **DATA QUALIFICATION CODE (QUAL CODE)**

#### **Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times$  IDL for inorganics and  $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e. chromatography, interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $>40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $<30\%$
- Z = Uncertainty at 2 sigma deviation is less than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed

**Appendix A**

Qualified Analytical Results

PROJ_NO: 02751	NSAMPLE	BP-VPB-TB-022112		
SDG: D1593	LAB_ID	D1593-01		
FRACTION: OV	SAMP_DATE	2/21/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.5	U		
1,1,2,2-TETRACHLOROETHANE	0.5	U		
1,1,2-TRICHLOROETHANE	0.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		
1,1-DICHLOROETHANE	0.5	U		
1,1-DICHLOROETHENE	0.5	U		
1,2,3-TRICHLOROBENZENE	0.5	U		
1,2,4-TRICHLOROBENZENE	0.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		
1,2-DIBROMOETHANE	0.5	U		
1,2-DICHLOROBENZENE	0.5	U		
1,2-DICHLOROETHANE	0.5	U		
1,2-DICHLOROPROPANE	0.5	U		
1,3-DICHLOROBENZENE	0.5	U		
1,4-DICHLOROBENZENE	0.5	U		
1,4-DIOXANE	10	UR	C	
2-BUTANONE	2.5	U		
2-HEXANONE	2.5	U		
4-METHYL-2-PENTANONE	2.5	U		
ACETONE	2.5	U		
BENZENE	0.5	U		
BROMOCHLOROMETHANE	0.5	U		
BROMODICHLOROMETHANE	0.5	U		
BROMOFORM	0.5	U		
BROMOMETHANE	0.5	U		
CARBON DISULFIDE	0.5	U		
CARBON TETRACHLORIDE	0.5	U		
CHLOROBENZENE	0.5	U		
CHLORODIBROMOMETHANE	0.5	U		
CHLOROETHANE	0.5	U		
CHLOROFORM	0.5	U		
CHLOROMETHANE	0.5	U		
CIS-1,2-DICHLOROETHENE	0.5	U		
CIS-1,3-DICHLOROPROPENE	0.5	U		
CYCLOHEXANE	0.5	U		

PROJ_NO: 02751	NSAMPLE	BP-VPB-TB-022112		
SDG: D1593	LAB_ID	D1593-01		
FRACTION: OV	SAMP_DATE	2/21/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
DICHLORODIFLUOROMETHANE	0.5	U		
ETHYLBENZENE	0.5	U		
ISOPROPYLBENZENE	0.5	U		
M+P-XYLENES	1	U		
METHYL ACETATE	0.5	U		
METHYL CYCLOHEXANE	0.5	U		
METHYL TERT-BUTYL ETHER	0.5	U		
METHYLENE CHLORIDE	0.5	U		
O-XYLENE	0.5	U		
STYRENE	0.5	U		
TETRACHLOROETHENE	0.5	U		
TOLUENE	0.5	U		
TRANS-1,2-DICHLOROETHENE	0.5	U		
TRANS-1,3-DICHLOROPROPENE	0.5	U		
TRICHLOROETHENE	0.5	U		
TRICHLOROFLUOROMETHANE	0.5	U		
VINYL CHLORIDE	0.5	U		

PROJ_NO: 02751	NSAMPLE	BP-VPB132-GW-942		
SDG: D1593	LAB_ID	D1593-02		
FRACTION: OV	SAMP_DATE	2/21/2012		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	2.5	U		
1,1,2,2-TETRACHLOROETHANE	2.5	U		
1,1,2-TRICHLOROETHANE	2.5	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	2.5	U		
1,1-DICHLOROETHANE	2.5	U		
1,1-DICHLOROETHENE	2.5	U		
1,2,3-TRICHLOROBENZENE	2.5	U		
1,2,4-TRICHLOROBENZENE	2.5	U		
1,2-DIBROMO-3-CHLOROPROPANE	2.5	UJ	C	
1,2-DIBROMOETHANE	2.5	U		
1,2-DICHLOROBENZENE	2.5	U		
1,2-DICHLOROETHANE	2.5	U		
1,2-DICHLOROPROPANE	2.5	U		
1,3-DICHLOROBENZENE	2.5	U		
1,4-DICHLOROBENZENE	2.5	U		
1,4-DIOXANE	50	UR	C	
2-BUTANONE	12.5	U		
2-HEXANONE	12.5	U		
4-METHYL-2-PENTANONE	12.5	U		
ACETONE	19	J	P	
BENZENE	2.5	U		
BROMOCHLOROMETHANE	2.5	U		
BROMODICHLOROMETHANE	2.5	U		
BROMOFORM	2.5	U		
BROMOMETHANE	2.5	U		
CARBON DISULFIDE	2.5	U		
CARBON TETRACHLORIDE	2.5	U		
CHLOROBENZENE	2.5	U		
CHLORODIBROMOMETHANE	2.5	U		
CHLOROETHANE	2.5	U		
CHLOROFORM	2.5	U		
CHLOROMETHANE	2.5	U		
CIS-1,2-DICHLOROETHENE	2.5	U		
CIS-1,3-DICHLOROPROPENE	2.5	U		
CYCLOHEXANE	2.5	U		

PROJ_NO: 02751	NSAMPLE	BP-VPB132-GW-942		
SDG: D1593	LAB_ID	D1593-02		
FRACTION: OV	SAMP_DATE	2/21/2012		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
DICHLORODIFLUOROMETHANE	2.5	U		
ETHYLBENZENE	2.5	U		
ISOPROPYLBENZENE	2.5	U		
M+P-XYLENES	5	U		
METHYL ACETATE	2.5	U		
METHYL CYCLOHEXANE	2.5	U		
METHYL TERT-BUTYL ETHER	2.5	U		
METHYLENE CHLORIDE	2.5	U		
O-XYLENE	2.5	U		
STYRENE	2.5	U		
TETRACHLOROETHENE	2.5	U		
TOLUENE	2.5	U		
TRANS-1,2-DICHLOROETHENE	2.5	U		
TRANS-1,3-DICHLOROPROPENE	2.5	U		
TRICHLOROETHENE	2.5	U		
TRICHLOROFLUOROMETHANE	2.5	UJ	C	
VINYL CHLORIDE	2.5	U		

PROJ_NO: 02751	NSAMPLE	BP-VPB132-SB-971		
SDG: D1593	LAB_ID	D1593-03		
FRACTION: MISC	SAMP_DATE	2/22/2012		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	MG/KG		
	PCT_SOLIDS	82.2		
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
TOTAL ORGANIC CARBON	20000	J	L	





### Volatile Organic Compounds

The following contaminants were detected in the laboratory method blank at the following maximum concentrations:

<u>Contaminant</u>	<u>Maximum Concentration (ug/m<sup>3</sup>)</u>	<u>Action Level (ug/m<sup>3</sup>)</u>
1,2-Dibromoethane	0.070	0.35
Toluene	0.060	0.3
4-Methyl-2-pentanone	0.067	0.335
Trans-1,3-Dichloropropene	0.098	0.49
Methylene chloride	0.14	1.4
Hexachlorobutadiene	0.6	3.0
1,2,4-Trichlorobenzene	0.69	3.45

An action level of 10X for was established to evaluate methylene chloride; 5X for the remaining compounds in the affected sample for laboratory method blank contamination. Sample aliquot and dilution factors were taken into consideration during application of the blank action level. The positive methylene chloride and trans-1,3-dichloropropene results less than the action level in sample BP-VPB132-AIR-041812 were qualified as (U).

The surrogate recovery for toluene-d8 in sample BP-VPB132-AIR-041812 was greater than the quality control limit. The positive results for sample BP-VPB132-AIR-041812 were qualified as estimated (J). No action was taken on the nondetected results because the surrogate recoveries were greater than the quality control limit.

Tentatively identified compounds (TICs) in sample BP-VPB132-AIR-041812 were qualified as presumptively present (NJ).

### Additional Comments

Positive results below the reporting limit (RL) and above the method detection limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit.

### EXECUTIVE SUMMARY

**Laboratory Performance Issues:** Blank contamination resulted in the qualification of methylene chloride. Surrogate recovery noncompliances resulted in qualification of the data.

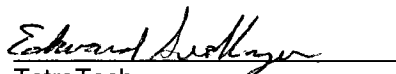
**Other Factors Affecting Data Quality:** Positive results below the reporting limit (RL) and above the method detection limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit.

TO: D. BRAYAK  
SDG: 1204433

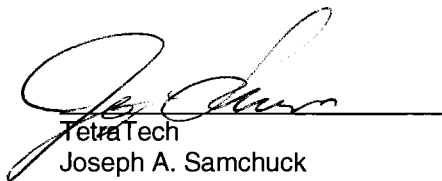
PAGE: 3

The data for these analyses were reviewed with reference to the EPA National Functional Guidelines for Organic Data Validation (10/99), USEPA Region II Standard Operating Procedures for Validating Air Samples Volatile Organic Analysis of Ambient Air In Canister by Method TO-15 HW-31 Revision #4 (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

The text of this report has been formulated to address only those problem areas affecting data quality.



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Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Region II Data Validation Forms
4. Appendix D - Support Documentation

**Appendix A**

Qualified Analytical Results

**Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times$  IDL for inorganics and  $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e. chromatography, interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $>40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $<30\%$
- Z = Uncertainty at 2 sigma deviation is less than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed

<b>PROJ_NO: 02751</b> <b>SDG: 1204433</b> <b>FRACTION: OV-M3</b> <b>MEDIA: AIR</b>	NSAMPLE	BP-VPB132-AIR-041812		
	LAB_ID	1204433-01A		
	SAMP_DATE	4/19/2012		
	QC_TYPE	NM		
	UNITS	UG/M3		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.62	U		
1,1,2,2-TETRACHLOROETHANE	0.78	U		
1,1,2-TRICHLOROETHANE	0.62	U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.44	J	PR	
1,1-DICHLOROETHANE	0.46	U		
1,1-DICHLOROETHENE	0.45	U		
1,2,4-TRICHLOROBENZENE	0.84	U		
1,2,4-TRIMETHYLBENZENE	2.8	J	R	
1,2-DIBROMOETHANE	0.87	U		
1,2-DICHLOROBENZENE	0.68	U		
1,2-DICHLOROETHANE	0.086	J	PR	
1,2-DICHLOROPROPANE	0.52	U		
1,2-DICHLOROTETRAFLUOROETHANE	0.79	U		
1,3,5-TRIMETHYLBENZENE	0.41	J	PR	
1,3-DICHLOROBENZENE	0.68	U		
1,4-DICHLOROBENZENE	0.68	U		
1,4-DIOXANE	0.41	U		
2,2,4-TRIMETHYLPENTANE	0.6	J	PR	
2-BUTANONE	8.3	J	R	
4-METHYL-2-PENTANONE	3.4	J	R	
BENZENE	1.1	J	R	
BENZYL CHLORIDE	0.59	U		
BROMODICHLOROMETHANE	0.76	U		
BROMOFORM	1.2	U		
BROMOMETHANE	0.32	J	PR	
CARBON TETRACHLORIDE	0.42	J	PR	
CHLOROBENZENE	0.52	U		
CHLORODIBROMOMETHANE	0.97	U		
CHLOROETHANE	0.3	U		
CHLOROFORM	0.55	U		
CHLOROMETHANE	0.71	J	R	
CIS-1,2-DICHLOROETHENE	0.45	U		
CIS-1,3-DICHLOROPROPENE	0.52	U		
CYCLOHEXANE	0.47	J	PR	
DICHLORODIFLUOROMETHANE	2.9	J	PR	

<b>PROJ_NO: 02751</b> <b>SDG: 1204433</b> <b>FRACTION: OV-M3</b> <b>MEDIA: AIR</b>	NSAMPLE	BP-VPB132-AIR-041812		
	LAB_ID	1204433-01A		
	SAMP_DATE	4/19/2012		
	QC_TYPE	NM		
	UNITS	UG/M3		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
ETHANOL	72	J	R	
ETHYLBENZENE	0.49	J	PR	
HEXACHLOROBUTADIENE	1.2	U		
HEXANE	3	J	R	
M+P-XYLENES	1.4	J	R	
METHYL TERT-BUTYL ETHER	0.41	U		
METHYLENE CHLORIDE	0.43	U	A	
O-XYLENE	0.54	J	PR	
STYRENE	0.37	J	PR	
TERTIARY-BUTYL ALCOHOL	2	J	PR	
TETRACHLOROETHENE	0.23	J	PR	
TOLUENE	17	J	R	
TRANS-1,2-DICHLOROETHENE	0.45	U		
TRANS-1,3-DICHLOROPROPENE	0.079	U	A	
TRICHLOROETHENE	0.61	U		
TRICHLOROFLUOROMETHANE	1.2	J	R	
VINYL CHLORIDE	0.29	U		

PROJ_NO: 02751	NSAMPLE	BP-VPB132-AIR-041812		
SDG: 1204433	LAB_ID	1204433-01A		
FRACTION: OV-V	SAMP_DATE	4/19/2012		
MEDIA: AIR	QC_TYPE	NM		
	UNITS	PPBV		
	PCT_SOLIDS	199.0		
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
ACETONE	11	NJ	Z1	
BUTANE	8.4	NJ	Z1	
CYCLOPENTANE	2.4	NJ	Z1	
DECANE, 2,2,9-TRIMETHYL-	8.1	NJ	Z1	
DECANE, 2,2-DIMETHYL-	2.6	NJ	Z1	
DECANE, 2,3,5-TRIMETHYL-	12	NJ	Z1	
HEPTANE, 4-ETHYL-2,2,6,6-TETRAMETHYL-	14	NJ	Z1	
NONADECANE	3.5	NJ	Z1	
OCTANE, 2,5,6-TRIMETHYL-	7.5	NJ	Z1	
UNDECANE, 2,8-DIMETHYL-	5	NJ	Z1	



**Section 7**

**VPB 132 Detected Compounds Table**

**VALIDATED ANALYTICAL DATA  
DETECTED COMPOUNDS FOR VERTICAL PROFILE BORING 132  
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT  
BETHPAGE, NEW YORK**

No.	Sample ID	Depth (feet bgs) <sup>1</sup>	Analysis Type	Total VOCs (µg/L) <sup>2</sup>	TCE	PCE	1,1-DCA	1,1-DCE	1,2-DCA	Chloroform	Cis-1,2-DCE	Ace.	Benzen e	Carbon Disulfide	Cyclohexane	Isopropylbenzene	Methyl cyclohexane	Methylene Chloride	tert BME
1	BP-VPB132-GW-061	61	AQ	2.2						2.2		15							
2	BP-VPB132-GW-121	121	SO <sup>3</sup>	ND								11 J							
3	BP-VPB132-GW-181	181	AQ	0.66	0.66 J														
4	BP-VPB132-GW-221	221	AQ	19.01	3.1	1.7	5.1	0.87 J	4.6	3.2	0.44 J		280		2.4	1.1 J	0.93 J		14
5	BP-VPB132-GW-241	241	SO <sup>3</sup>	ND								35	3.4 J						
6	BP-VPB132-GW-261	261	AQ	5.1			5.1 J												3.8 J
7	BP-VPB132-GW-281	281	AQ	ND										0.57 J					
8	BP-VPB132-GW-301	301	AQ	ND															
9	BP-VPB132-GW-321	321	AQ	ND															
10	BP-VPB132-GW-341	341	AQ	ND															
11	BP-VPB132-GW-361	361	AQ	ND															
12	BP-VPB132-GW-381	381	AQ	ND															
13	BP-VPB132-GW-401	401	AQ	ND															
14	BP-VPB132-GW-421	421	AQ	ND															
15	BP-VPB132-GW-441	441	AQ	ND															
16	BP-VPB132-GW-461	461	SO <sup>3</sup>	ND								29							
17	BP-VPB132-GW-481	481	AQ	ND															
18	BP-VPB132-GW-501	501	AQ	ND															
19	BP-VPB132-GW-521	521	AQ	ND															
20	BP-VPB132-GW-541	541	AQ	ND															
21	BP-VPB132-GW-561	561	AQ	ND								13							
22	BP-VPB132-GW-581	581	AQ	ND															
23	BP-VPB132-GW-601	601	AQ	ND															
24	BP-VPB132-GW-641	641	AQ	ND								5							
25	BP-VPB132-GW-681	681	SO <sup>3</sup>	ND								19 J							
26	BP-VPB132-GW-701	701	AQ	ND								4.8 J							
27	BP-VPB132-GW-721	721	SO <sup>3</sup>	ND								17 J							
28	BP-VPB132-GW-741	741	SO <sup>3</sup>	ND								25 J							
29	BP-VPB132-GW-761	761	SO <sup>3</sup>	ND								13 J							
30	BP-VPB132-GW-781	781	SO <sup>3</sup>	ND								20 J							
31	BP-VPB132-GW-821	821	SO <sup>3</sup>	ND								15 J							
32	BP-VPB132-GW-841	841	SO <sup>3</sup>	ND								28						5.1	
33	BP-VPB132-GW-861	861	SO <sup>3</sup>	ND								37							
34	BP-VPB132-GW-942	942	SO <sup>3</sup>	ND								19 J							

**Notes:**

bgs: Below ground surface  
µg/L: micrograms per liter  
J: Estimated Value  
ND: Not detected

TCE: Trichloroethene  
PCE: Tetrachloroethene  
1,1-DCA: 1,1-Dichloroethane  
1,1-DCE: 1,1-Dichloroethene

1,2-DCA: 1,2-Dichloroethane  
cis-1,2-DCE: 1,2-Dichloroethene  
Ace.: Acetone  
tert BME: tert. ButylMethylEther

<sup>1</sup> Samples were taken on 20-foot centers starting at 200 ft bgs to the total depth of the borehole. Where a sample could not be obtained from the designated interval, an attempt was made at the next 10-foot interval or at the direction of the site

<sup>2</sup> TCE, PCE, 1,1-DCA, 1,1-DCE, 1,1,1-TCA, 1,2-DCA, Cis-1,2-DCE, and chloroform used to calculate Total VOCs

<sup>3</sup> Results are reported as a soil on a wet weight basis (microgram per kilogram)

## **Section 8**

### **BPOW 5-1, 5-2, and 5-3 Summary**

- BPOW 5-1, 5-2, and 5-3 Boring Log
- BPOW 5-1, 5-2, and 5-3 Well Construction Log
- BPOW 5-1, 5-2, and 5-3 Well Development Record
- BPOW 5-1, 5-2, and 5-3 GW Sample Log
- BPOW 5-1, 5-2, and 5-3 Chain of Custody Record
- BPOW 5-1, 5-2, and 5-3 Analytical Data Sheet
- BPOW 5-1, 5-2, and 5-3 Validation Letter and Table

**BPOW 5-1, 5-2, and 5-3**  
**BORING LOG SHEETS**



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G02751-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: BPOW 5-1  
 DATE: 4/13/12 / 4/18/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	0				DENSE	YELLOW BRN	SAND - SOME GRAVEL	GW SW	MOIST				0
	20						SAME		FOR DETAILS SEE VPB-132 AND GAMMA LOGS				
	40						SAME						0
	60				8" CASING TO 58'±				CASING SET TO ~ 58' ON 4/13/12				
	80				DENSE	BRN	SAND - TR GRAVEL	SM SP	WET				
	100						SAME						0

4/18

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: DRILL w/ 10 1/4 HSA TO 60'± THEN SET 8" CASING IN 3 SECTIONS TO 58'± BGS

Drilling Area Background (ppm):

Converted to Well: Yes  No  Well I.D. #: BPOW 5-1





# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G02751-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: BPOW 5-1  
 DATE: 4/18/12 → 4/19/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)									
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**						
	100																		
	1400 C 105'				DENSE	BRN	SAND-TR GRAVEL	SM SP	WET										0
	120																		
	140																		0
	160																		
	180																		0
	200																		

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm):

Converted to Well: Yes  No  Well I.D. #: BPOW 5-1



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G02751-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: BPOW 5-1  
 DATE: 4/19/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	200				DENSE	GRAY	SAND	SM / SP	WET				0
	220						SAME						
	240						SAME						0
	260						SAND-TR CLAY						
	280						SAME						0
	300												

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm):

Converted to Well: Yes  No  Well I.D. #: BPOW 5-1





# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G02751-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **BPOW 5-1**  
 DATE: 4/19/12 → 4/20/12  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	<u>300</u>				<u>DENSE</u>	<u>GRAY</u>	<u>F/C SAND</u>	<u>SM</u> <u>SP</u>	<u>WET</u>				<u>0</u>
	<u>320</u>						<u>SAME</u>						
	<u>340</u>						<u>SAME</u>						<u>0</u>
	<u>360</u>						<u>SAME</u>						
	<u>380</u>						<u>SAME</u>						<u>0</u>
	<u>400</u>												

4/19  
4/20

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes  No \_\_\_\_\_ Well I.D. #: **BPOW 5-1**





# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G02751-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: BPOW 5-1  
 DATE: 4/20/12 → 4/23/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	400				DENSE	GRAY	F/C SAND	SM SP	WET				0
	420						SAME						
	440						SAME						0
4120	460						SAME						
4123	480						SAME						0
	500												

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes  No \_\_\_\_\_ Well I.D. #: BPOW 5-1



# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G02751-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: BPOW 5-1  
 DATE: 4/25/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FT.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	500				DENSE	GRAY	F/M SAND	SH/ SP	WET	0			
	520												
				TD 527			SET WELL SCREEN		480 → 510	0			
							SUMP		510 → 515				
	540												

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm):

Converted to Well: Yes  No \_\_\_\_\_ Well I.D. #: BPOW 5-1





# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G02751-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: BPOW 5-2  
 DATE: 4/2/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
	0				DENSE	YELLOW BRN	SAND - SOME GRAVEL	SW GW	CASING SET TO ~ 58' ON 3/9/12 USING HSA					0
	20								(See VPB-132 for Details)					
	40								SAME	MOIST → WET				0
	60								SAME	WET				
	80					DENSE	BRN SAND - TR GRAY GRAVEL							0
	100													

3/9  
4/2

CAS TO ~ 58'

SP  
SM

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: MUD ROTARY 8" Ø BELOW CASING

Drilling Area Background (ppm): 0

Converted to Well: Yes x No        Well I.D. #: BPOW 5-2



# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G02751-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **BPOW 5-2**  
 DATE: **4/2/12 → 4/3/12**  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	100				DENSE	BRN GRAY	F/M SAND	SM	WET				0
	120						SAME						
	140						SAME						0
	160						SAME						
	180						SAME						0
	200												

412  
413

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes  No \_\_\_\_\_ Well I.D. #: **BPOW 5-2**





# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G02751-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: BPOW 5-2  
 DATE: 4/3/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
	200				DENSE GRAY		F/M SAND	SM	WET					0
							TR LIGNITE	SP						
	220						SAME	"						
	240						SAME	"						0
	260						SAME - TR.							
							LIGNITE							
	280						SAME		LESS LIGNITE					0
	300													

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes x No \_\_\_\_\_ Well I.D. #: BPOW 5-2



# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G02751-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **BPOW 5-2**  
 DATE: **4/3/12**  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
	300				DENSE	GRY	F/M SAND	SM	WET					0
	320						SAME							
	340						SAME							0
	360						SAME							
	380						SAME							0
	400													

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes x No \_\_\_\_\_ Well I.D. #: **BPOW 5-2**





# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G02751-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **BPOW 5-2**  
 DATE: **4/4/12**  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	400				DENSE	GRAY	F/M SAND	SM / SP	WET				0
	420						SAME						
	440						SAME						0
	460						SAME						
	480						SAME						0
	500												

4/12

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes x No \_\_\_\_\_ Well I.D. #: **BPOW 5-2**



# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G02751-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **BPOW 5-2**  
 DATE: **4/5/12**  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)								
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**					
	500																	
					DENSE	GRAY	SAND (F/M) TR CLAY	SM/SP	WET									0
	520																	
	540																	
	560																	
	580																	
	600																	

44  
45



SCREEN  
540 → 580

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes  No \_\_\_\_\_ Well I.D. #: **BPOW 5-2**





# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G02751-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **BPOW 5-3**  
 DATE: **3/8/12 → 3/15/12**  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)								
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**					
	0																	
	3/8				DENSE	YELLOW BRN	SAND - SOME GRAVEL	SW	DAMP → MOIST									0
									SUB ROUND GRAVEL 1/4" Φ SIZE									
	20						SAME		SOME WETNESS AT 20' ±									0
	40						SAME											0
	60						SAME		8" Ø STEEL CAS TO ~ 58' ON 3/8/12.									
	80						SAME LESS GRAVEL											0
	100																	

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: 10 1/2 HSA TO 60' ± THEN SET 8" CASING.  
PROCEED W/ MUD ROTARY TO TD.

Drilling Area Background (ppm):

Converted to Well: Yes  No  Well I.D. #: **BPOW 5-3**



# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G02751-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **BPOW 5-3**  
 DATE: 3/15/12 → 3/16/12  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	100				DENSE	BRN	SAND-TR GRAVEL	SP SM	WET				0
	120				DENSE	GRAY BRN	SILTY F/M SAND		WET LESS GRAVEL				
	140						SAME						0
	160						SAME						
	180						SAME						0
	200												

3/15  
 3/16

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes  No \_\_\_\_\_ Well I.D. #: **BPOW 5-3**





# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G02751-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: BPOW 5-3  
 DATE: 3/16/12 → 3/19/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	200				DENSE	GRAY	F/M SAND	SM SP	WET				0
	220						SAME						
	240						SAME						0
	260						SAME						
	280						SAME						0
	300												

3/16  
3/19

1000

1100

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes  No \_\_\_\_\_ Well I.D. #: BPOW 5-3



# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G02751-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **BPOW 5-3**  
 DATE: **3/19/12**  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	300				DENSE GRAY		F/M SAND	SP	WET				0
							TR LIGNITE	SM					
	320												
	340												0
	360												
	380												0
	400												

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm):

Converted to Well: Yes  No \_\_\_\_\_

Well I.D. #: **BPOW 5-3**





# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G02751-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **BPOW 5-3**  
 DATE: **3/20/12 → 3/21/12**  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**	
	400				DENSE	GRAY	SAND F/M - TR CLAY	SM / SP	WET					0
	420						SAME							
	440						SAME							0
	460						SAME							
	480						SAME							0
	500													

1230

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm):

Converted to Well: Yes  No \_\_\_\_\_ Well I.D. #: **BPOW 5-3**



# BORING LOG

PROJECT NAME: **BETHPAGE OU-2 OFFSITE GW**  
 PROJECT NUMBER: **112G02751-PHASE II**  
 DRILLING COMPANY: **DELTA WELL & PUMP**  
 DRILLING RIG: **MUD ROTARY**

BORING No.: **BPOW 5-3**  
 DATE: 3/20/12 → 3/21/12  
 GEOLOGIST: **Conti**  
 DRILLER: **C. Twigg**

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	500				DENSE	GRAY	SAND (F/M)	SM SP	WET				0
							SOME CLAY ~ 510'						
	515						TO 520±						
	520						SAME - LESS CLAY						
	540						SAME						0
	560						SAME						
	580						SAME						0
	600												

3/20  
3/21

\* When rock coring, enter rock brokenness.

\*\* Include monitoring reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm):

Converted to Well: Yes  No \_\_\_\_\_ Well I.D. #: **BPOW 5-3**





# BORING LOG

PROJECT NAME: BETHPAGE OU-2 OFFSITE GW  
 PROJECT NUMBER: 112G02751-PHASE II  
 DRILLING COMPANY: DELTA WELL & PUMP  
 DRILLING RIG: MUD ROTARY

BORING No.: BPOW 5-3  
 DATE: 3/21/12  
 GEOLOGIST: Conti  
 DRILLER: C. Twigg

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	600				DENSE	GRAY	SAND/F/M TR CLAY	SM /SP	WET				0
	620			620			SAME		F-M SAND CUTTINGS				
	640						SAME						0
	660			660			SAME		F/M SAND-TR CLAY-CUTTINGS				
	680			TD			TD @ 680'						0

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area  
 Background (ppm):

Converted to Well: Yes  No  Well I.D. #: BPOW 5-3

**BPOW 5-1, 5-2, and 5-3**  
**WELL CONSTRUCTION LOG SHEETS**





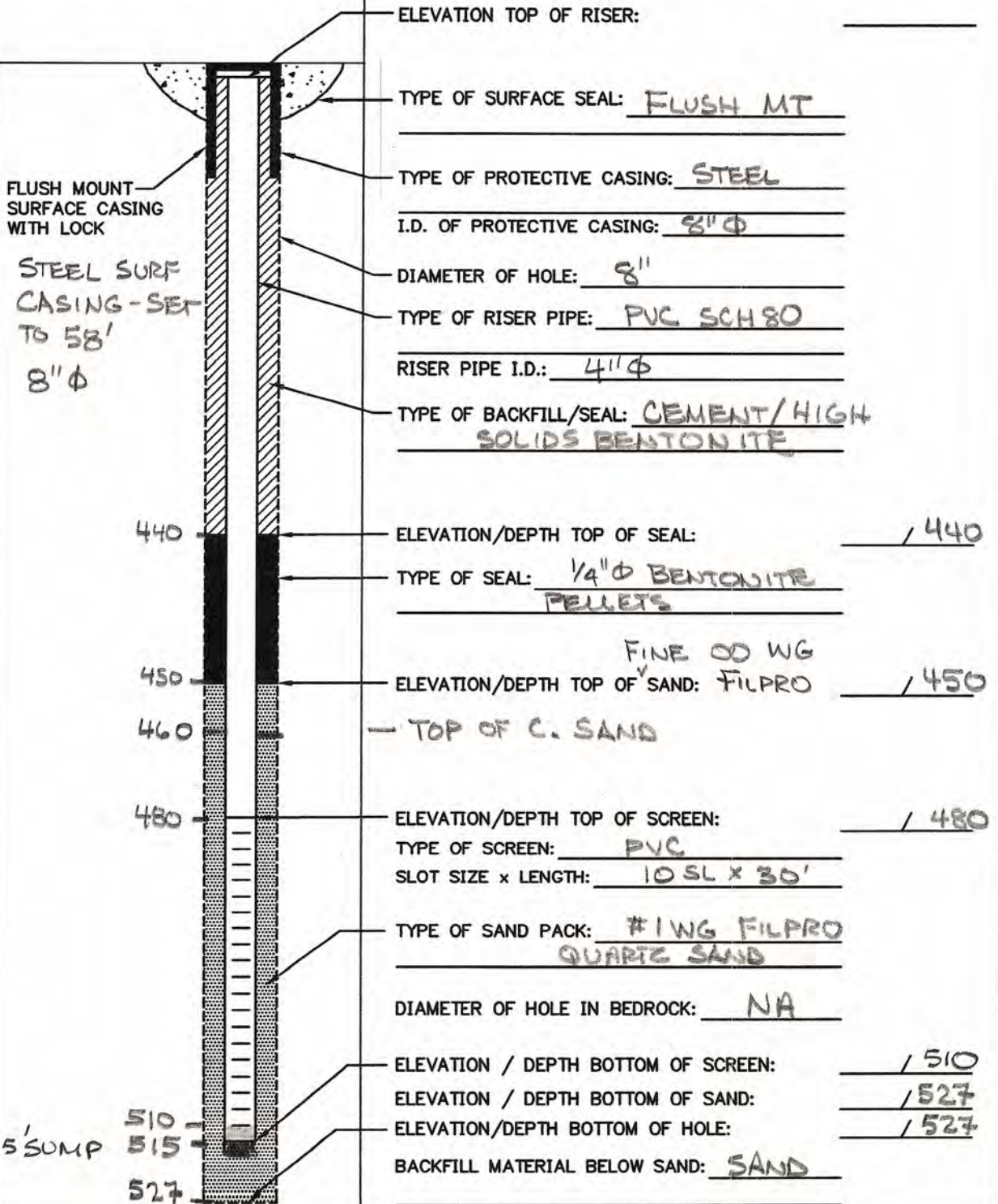
Tetra Tech NUS, Inc.

# OVERBURDEN MONITORING WELL SHEET FLUSH - MOUNT

WELL NO.: BPOW 5-1

PROJECT <u>BETPAGE QU2</u>	LOCATION <u>BETHPAGE NY</u>	DRILLER <u>C. TWIGG</u>
PROJECT NO. <u>112602751</u>	BORING <u>VPB-132 LOC</u>	DRILLING METHOD <u>MUD ROT</u>
DATE BEGUN <u>4/24/12</u>	DATE COMPLETED <u>4/25/12</u>	DEVELOPMENT METHOD <u>AIR/PUMP</u>
FIELD GEOLOGIST <u>CONTI</u>	DATUM _____	
GROUND ELEVATION _____		

ACAD:FORM\_MWFM.dwg 07/26/99 INL



ELEVATION TOP OF RISER: \_\_\_\_\_

TYPE OF SURFACE SEAL: FLUSH MT

TYPE OF PROTECTIVE CASING: STEEL

I.D. OF PROTECTIVE CASING: 8" φ

DIAMETER OF HOLE: 8"

TYPE OF RISER PIPE: PVC SCH 80

RISER PIPE I.D.: 4" φ

TYPE OF BACKFILL/SEAL: CEMENT/HIGH SOLIDS BENTONITE

ELEVATION/DEPTH TOP OF SEAL: \_\_\_\_\_ / 440

TYPE OF SEAL: 1/4" φ BENTONITE PELLETS

ELEVATION/DEPTH TOP OF SAND: \_\_\_\_\_ / 450

FINE 00 WG FILPRO

- TOP OF C. SAND

ELEVATION/DEPTH TOP OF SCREEN: \_\_\_\_\_ / 480

TYPE OF SCREEN: PVC

SLOT SIZE x LENGTH: 10 SL x 30'

TYPE OF SAND PACK: #1 WG FILPRO QUARTZ SAND

DIAMETER OF HOLE IN BEDROCK: NA

ELEVATION / DEPTH BOTTOM OF SCREEN: \_\_\_\_\_ / 510

ELEVATION / DEPTH BOTTOM OF SAND: \_\_\_\_\_ / 527

ELEVATION/DEPTH BOTTOM OF HOLE: \_\_\_\_\_ / 527

BACKFILL MATERIAL BELOW SAND: SAND



Tetra Tech NUS, Inc.

# OVERBURDEN MONITORING WELL SHEET FLUSH - MOUNT

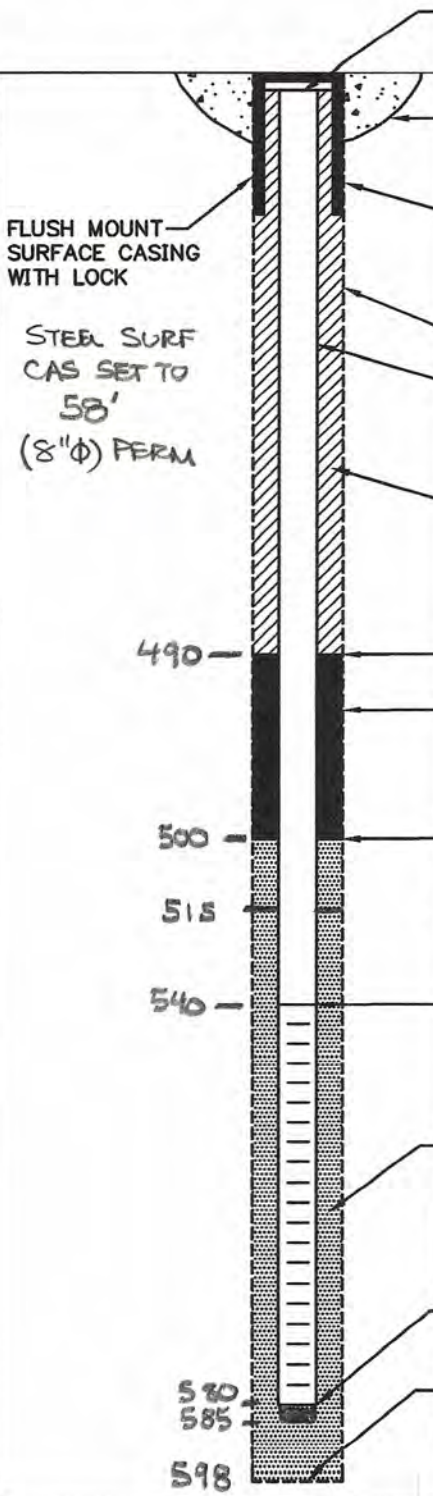
WELL NO.: BPOW 5-2

INTERMEDIATE

VPB-132 LOC.

PROJECT <u>BETHPAGE 002</u>	LOCATION <u>BETHPAGE, NY</u>	DRILLER <u>C. TWIGG</u>
PROJECT NO. <u>112602751</u>	BORING <u>BPOW 5-2</u>	DRILLING METHOD <u>MUD ROTARY</u>
DATE BEGUN <u>4/6/12</u>	DATE COMPLETED <u>4/9/12</u>	DEVELOPMENT METHOD <u>AIR/PUMP</u>
FIELD GEOLOGIST <u>CONTI</u>	GROUND ELEVATION _____	DATUM _____

ACAD:FORM\_MWFM.dwg 07/28/99 INL



ELEVATION TOP OF RISER: \_\_\_\_\_

TYPE OF SURFACE SEAL: FLUSH MT.

TYPE OF PROTECTIVE CASING: STEEL

I.D. OF PROTECTIVE CASING: 8" ST. CASING

DIAMETER OF HOLE: 8"

TYPE OF RISER PIPE: PVC SCH 80

RISER PIPE I.D.: 4"

TYPE OF BACKFILL/SEAL: CEMENT/HIGH SOLIDS BENTONITE

ELEVATION/DEPTH TOP OF SEAL: 1490

TYPE OF SEAL: 1/4" φ BENTONITE PELLETS

ELEVATION/DEPTH TOP OF SAND: 1500 FINE 00 WG FILPRO SAND

515 - TOP #1 SAND 515

ELEVATION/DEPTH TOP OF SCREEN: 1540

TYPE OF SCREEN: PVC SCH 80

SLOT SIZE x LENGTH: 10 SL x 40'

TYPE OF SAND PACK: #1 WG FILPRO QUARTZ SAND

DIAMETER OF HOLE IN BEDROCK: \_\_\_\_\_

ELEVATION / DEPTH BOTTOM OF SCREEN: 1580

ELEVATION / DEPTH BOTTOM OF SAND: 1598

ELEVATION/DEPTH BOTTOM OF HOLE: 1598

BACKFILL MATERIAL BELOW SAND: SAND





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# OVERBURDEN MONITORING WELL SHEET FLUSH - MOUNT

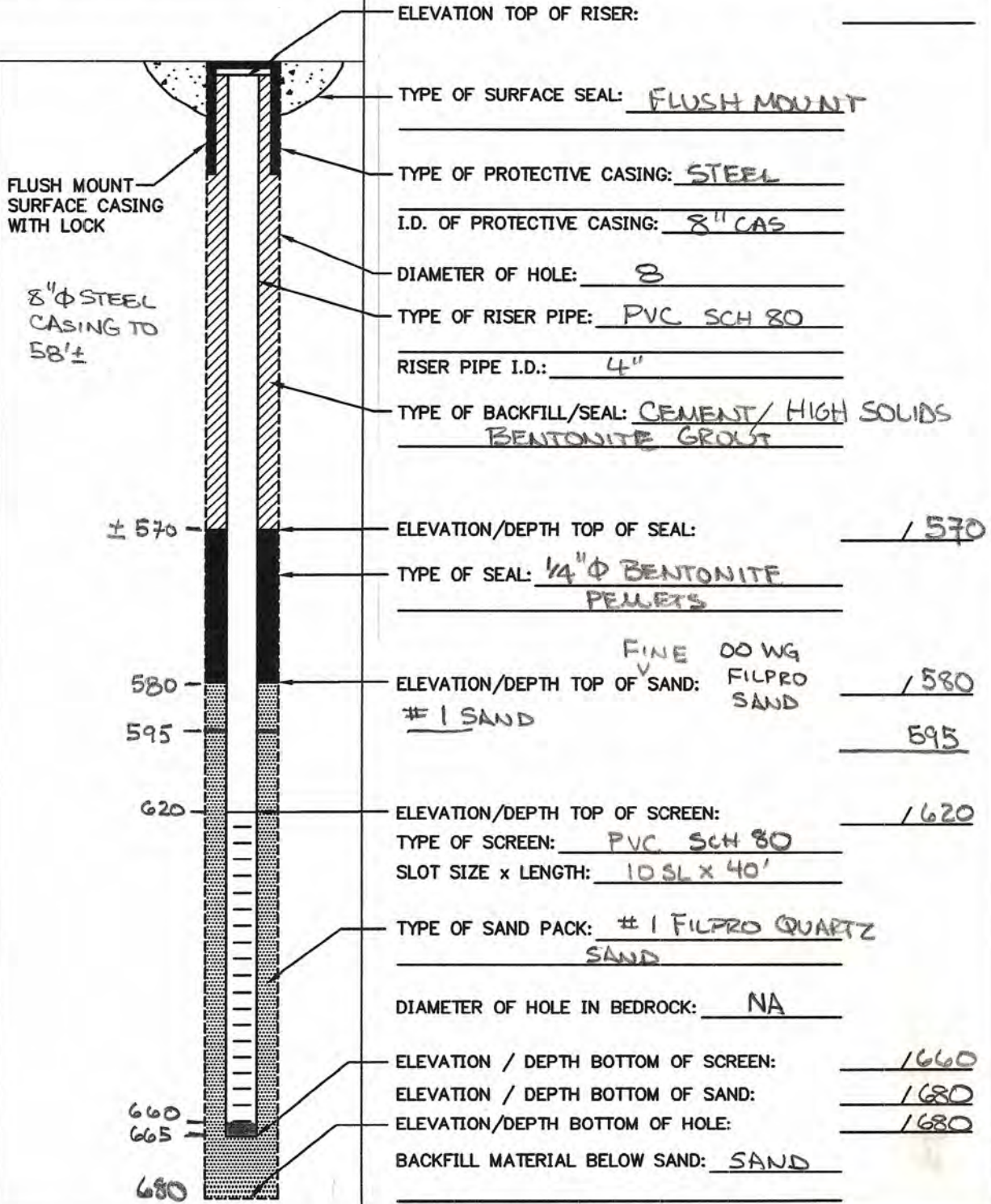
WELL NO.: BPOW 5-3

DEEP

VPB-132 LOC.

PROJECT <u>BETHPAGE OU 2</u>	LOCATION <u>BETHPAGE NY</u>	DRILLER <u>C. TWIGG</u>
PROJECT NO. <u>112G02751</u>	BORING <u>BPOW 5-3</u>	DRILLING METHOD <u>MUD ROT</u>
DATE BEGUN <u>3/21/12</u>	DATE COMPLETED <u>3/22/12</u>	DEVELOPMENT METHOD <u>AIR/PUMP</u>
FIELD GEOLOGIST <u>CONTI</u>	DATUM _____	
GROUND ELEVATION _____		

ACAD:FORM\_MWF.M.dwg 07/20/99 INL



ELEVATION TOP OF RISER: \_\_\_\_\_

TYPE OF SURFACE SEAL: FLUSH MOUNT

TYPE OF PROTECTIVE CASING: STEEL

I.D. OF PROTECTIVE CASING: 8" CAS

DIAMETER OF HOLE: 8

TYPE OF RISER PIPE: PVC SCH 80

RISER PIPE I.D.: 4"

TYPE OF BACKFILL/SEAL: CEMENT/ HIGH SOLIDS BENTONITE GROUT

ELEVATION/DEPTH TOP OF SEAL: ± 570 / 570

TYPE OF SEAL: 1/4" φ BENTONITE PELLETS

ELEVATION/DEPTH TOP OF SAND: 580 / 580  
595 / 595

ELEVATION/DEPTH TOP OF SCREEN: 620 / 620

TYPE OF SCREEN: PVC SCH 80

SLOT SIZE x LENGTH: 10 SL x 40'

TYPE OF SAND PACK: #1 FILPRO QUARTZ SAND

DIAMETER OF HOLE IN BEDROCK: NA

ELEVATION / DEPTH BOTTOM OF SCREEN: \_\_\_\_\_ / 660

ELEVATION / DEPTH BOTTOM OF SAND: \_\_\_\_\_ / 665

ELEVATION/DEPTH BOTTOM OF HOLE: \_\_\_\_\_ / 680

BACKFILL MATERIAL BELOW SAND: SAND

**BPOW 5-1, 5-2, and 5-3**  
**WELL DEVELOPMENT LOG SHEETS**



Tetra Tech

AIR

MONITORING WELL DEVELOPMENT RECORD

Page 1 of     

Well: BPOW5-1 Depth to Bottom (ft.): 510' Responsible Personnel: V. Shickora J. Stegers  
 Site: NWIRP Bethpage Static Water Level Before (ft.): 33.99' Drilling Co.: Delta Well + Pump  
 Date Installed: 4-25-12 Static Water Level After (ft.):      Project Name: NWIRP Bethpage  
 Date Developed: 5-16-12 Screen Length (ft.): 30 feet Project Number: 112602751  
 Dev. Method: Air Development Specific Capacity: 311 gallons  
 Pump Type: Air Lift Casing ID (in.): 4 inch

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units <u>ms/cm</u> )	Turbidity (NTU)	Remarks (odor, color, etc.)
<u>5-16-12</u>								
<u>1300</u>	-	<u>~25</u>	<u>NA</u>					<u>start Air Development water muddy (gray)</u>
<u>1320</u>	-		<u>NA</u>	<u>17.11</u>	<u>5.20</u>	<u>0.069</u>	<u>304</u>	<u>cloudy (gray)</u>
<u>1345</u>	-		<u>NA</u>	<u>16.29</u>	<u>4.90</u>	<u>0.068</u>	<u>23.9</u>	<u>clear</u>
<u>1410</u>	-		<u>NA</u>	<u>16.20</u>	<u>4.79</u>	<u>0.068</u>	<u>9.8</u>	<u>clear</u>
<u>1436</u>	-	<u>~8000</u>	<u>19.94'</u>	<u>16.16</u>	<u>4.71</u>	<u>0.069</u>	<u>6.2</u>	<u>clear - stop development</u>
<u>0900</u> <u>5-17-12</u>	-	-	<u>20.40'</u>	-	-	-	-	<u>RE-START AIR DEV. CLEAR</u>
<u>0930</u>	-		-	<u>15.03</u>	<u>4.69</u>	<u>.074</u>	<u>5.3</u>	<u>CLEAR</u>
<u>1000</u>	-		-	<u>14.16</u>	<u>4.47</u>	<u>.070</u>	<u>3.2</u>	<u>" (31L = 046 TDS)</u>
<u>1030</u>	-		-	<u>13.66</u>	<u>4.31</u>	<u>.071</u>	<u>2.4</u>	<u>"</u>
<u>1100</u>	-	<u>~8000</u>	<u>~20.80'</u>	<u>13.71</u>	<u>4.23</u>	<u>.071</u>	<u>2.1</u>	<u>" (91L 046 TDS)</u>

~65 GPM





Tetra Tech

## PUMP

## MONITORING WELL DEVELOPMENT RECORD

Page 1 of 1

Well: BPOWS-1 Depth to Bottom (ft.): 510' Responsible Personnel: Vince Shickora  
 Site: NWIRP Bethpage Static Water Level Before (ft.): 20.65 Drilling Co.: Delta Well + Pump  
 Date Installed: 4-25-12 Static Water Level After (ft.): \_\_\_\_\_ Project Name: NWIRP Bethpage  
 Date Developed: 5-23-12 Screen Length (ft.): 30 Feet Project Number: 112602751  
 Dev. Method: submersible pump Specific Capacity: 319 gallons  
 Pump Type: Grundfos Casing ID (in.): 4 inch

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units <u>µS/cm</u> )	Turbidity (NTU)	Remarks (odor, color, etc.)
0935	<del>Totalizer Gallons</del>	-	20.65'	-	-	-	-	-
1030	169810	1	21.98'	16.99	4.57	0.145	49.4	slight Tint (Gray)
1045	169954	145	21.18'	16.30	5.20	0.085	15.3	clear
1100	170090	281	20.98'	16.01	5.24	0.078	4.6	clear (raise pump in well ~ 25')
1120	170268	459	20.94'	16.05	5.16	0.074	8.5	clear
1140	170445	636	20.89'	15.93	5.05	0.073	1.2	clear (lower pump in well ~ 25')
1200	170621	812	20.85'	15.85	4.97	0.071	0.9	clear
1220	170795	986	20.84'	15.77	4.90	0.070	1.2	clear (raise pump in well ~ 20')
1240	170968	1159	20.83'	15.73	4.84	0.070	1.1	clear
1300	171140	1331	20.83'	15.64	4.77	0.071	0.8	clear (lower pump in well ~ 20')
1320	171311	1502	20.82'	15.58	4.73	0.071	0.4	clear
1340	171480	1671	20.82'	15.56	4.72	0.070	0.3	clear
1400	171653	1844	20.82'	15.60	4.71	0.071	0.3	clear. collect sample BP-BPOWS-1-052312







Tetra Tech NUS, Inc.

**PUMP**  
**MONITORING WELL DEVELOPMENT RECORD**Page 1 of 1

Well: BPow 5-2 Depth to Bottom (ft.): 580' Responsible Personnel: Vince Shickora  
 Site: NWIRP Bathpage Static Water Level Before (ft.): 20.87' Drilling Co.: Delta Well & Pump  
 Date Installed: 4-9-12 Static Water Level After (ft.): \_\_\_\_\_ Project Name: NWIRP Bathpage  
 Date Developed: 5-22-12 Screen Length (ft.): 40' Project Number: 112602751  
 Dev. Method: Submersible pump Specific Capacity: 365 gallons ⊗ pump set in well at ~ 535' BGS  
 Pump Type: Grundfos Casing ID (in.): 4 inch

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units $\mu S/cm$ )	Turbidity (NTU)	Remarks (odor, color, etc.)
0820	(Totalizer gallons)	—	20.87	—	—	—	—	Initial reading
0836	167460	0.5	21.55	16.39	4.54	0.184	66.3	start development (Tinted Gray)
0845	167551	91	21.09	15.05	4.98	0.094	31.7	slight tint (Gray)
0900	167696	236	21.05	15.02	5.20	0.085	12.5	clear
0920	167885	425	20.98	14.97	5.27	0.079	3.6	clear - (raise pump in well ~ 20')
0940	168068	608	20.92	14.84	5.28	0.077	1.8	clear
1000	168250	790	20.92	14.79	5.29	0.075	1.1	clear (Lower pump in well ~ 20')
1020	168429	969	20.91	14.83	5.29	0.074	0.8	clear
1040	168608	1148	20.90	14.77	5.29	0.073	0.4	clear (raise pump in well ~ 25')
1100	168783	1323	20.87	14.72	5.28	0.072	0.2	clear
1120	168957	1497	20.85	14.67	5.27	0.071	0.3	clear (Lower pump in well ~ 25')
1140	169132	1672	20.83	14.63	5.25	0.071	0.2	clear
1200	169305	1845	20.82	14.60	5.26	0.070	0.1	clear
1220	169478	2018	20.80	14.62	5.25	0.071	0.1	clear
1240	169648	2188	20.79	14.61	5.24	0.070	0.1	clear
1300	169813	2353	20.78	14.59	5.23	0.071	0.1	clear - collect sample #BP-BPow 5-2-052212



AIR



Tetra Tech NUS, Inc.

**MONITORING WELL DEVELOPMENT RECORD**

Page 1 of     

Well: BPOW5-3 Depth to Bottom (ft.): 660' Responsible Personnel: Vinice Shickora John Stevens  
 Site: NWIAP Bethpage Static Water Level Before (ft.): 38.64' Drilling Co.: Delta Well + Pump Inc.  
 Date Installed: 3-22-12 Static Water Level After (ft.): 21.15' Project Name: NWIAP Bethpage  
 Date Developed: 5-14-12 Screen Length (ft.): 40' Project Number: 112662751  
 Dev. Method: Air + submersible Specific Capacity: 405 gpm  
 Pump Type: Air Lift Casing ID (in.): 4 inch

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units $mS/cm$ )	Turbidity (NTU)	Remarks (odor, color, etc.)
<u>5/14/12</u>								
<u>1055</u>	-	<u>~10</u>	<u>NA</u>				<u>very cloudy</u>	<u>Air Development begins water very muddy (gray)</u>
<u>1120</u>	-		<u>NA</u>	<u>16.10</u>	<u>5.88</u>	<u>0.138</u>	<u>482</u>	<u>cloudy (gray)</u>
<u>1150</u>	-		<u>NA</u>	<u>16.24</u>	<u>6.27</u>	<u>0.060</u>	<u>250</u>	<u>stop pump - break for lunch</u>
<u>1228</u>	-		<u>NA</u>	<u>16.37</u>	<u>6.28</u>	<u>0.046</u>	<u>280</u>	<u>restart pump - water cloudy (gray)</u>
<u>1300</u>	-		<u>NA</u>	<u>16.40</u>	<u>6.15</u>	<u>0.040</u>	<u>181</u>	<u>Tinted (gray)</u>
<u>1330</u>	-		<u>NA</u>	<u>16.51</u>	<u>6.18</u>	<u>0.040</u>	<u>197</u>	<u>" "</u>
<u>1400</u>	-	<u>~8000</u>	<u>NA</u>	<u>16.28</u>	<u>6.09</u>	<u>0.039</u>	<u>89.2</u>	<u>slight tint (gray) stop air compressor</u>
<u>1415</u>	-	-	<u>21.15'</u>	-	-	-	-	-
<u>5/15/12</u>								
<u>0900</u>	-	-	<u>20.70'</u>	-	-	-	-	<u>before development</u>
<u>0920</u>	-	<u>~10</u>	-	<u>16.56</u>	<u>5.79</u>	<u>0.126</u>	<u>94.3</u>	<u>Restart Air Development</u>
<u>1000</u>	-		-	<u>15.95</u>	<u>5.56</u>	<u>0.043</u>	<u>18.6</u>	<u>clear</u>
<u>1040</u>	-		-	<u>15.69</u>	<u>5.54</u>	<u>0.039</u>	<u>9.75</u>	<u>clear</u>
<u>1055</u>	-	<u>~8000</u>		<u>15.24</u>	<u>5.56</u>	<u>0.037</u>	<u>7.12</u>	<u>stop air development (clear)</u>



Tetra Tech

PUMP

## MONITORING WELL DEVELOPMENT RECORD

Page 1 of 1

Well: BPOW5-3 Depth to Bottom (ft.): 660' Responsible Personnel: Vince Shickora  
 Site: NWIRP Bethpage Static Water Level Before (ft.): 22.03 Drilling Co.: Delta Well + Pump  
 Date Installed: 3-22-12 Static Water Level After (ft.): \_\_\_\_\_ Project Name: NWIRP Bethpage  
 Date Developed: 5-21-12 Screen Length (ft.): 40' Project Number: 112602751  
 Dev. Method: submersible pump Specific Capacity: 410 gallons \* Pump set in well at 615' BGS  
 Pump Type: Grundfos 3" Casing ID (in.): 4 inch

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units <u>mcu</u> )	Turbidity (NTU)	Remarks (odor, color, etc.)
0935	(gallons Totalizer)	—	22.03'	—	—	—	—	Initial water level
1123	165766	6	22.08'	17.94	4.69	0.105	14.4	clear - start pumping
1130	165828	68	22.46'	15.88	5.60	0.058	107	Tinted (Gray)
1145	165974	214	22.28'	15.65	5.47	0.049	59.8	slight Tint (Gray)
1200	166163	343	22.04'	15.20	5.47	0.047	32.3	very slight Tint (Gray)
1220	166284	524	21.97'	15.26	5.45	0.045	19.6	clear
1240	166454	694	21.89'	15.19	5.44	0.043	16.0	clear - (raise pump ~ 20 feet)
1300	166627	867	21.82'	15.18	5.46	0.043	13.7	clear
1320	166802	1042	21.82'	15.14	5.45	0.042	8.2	clear - (lower pump ~ 20)
1340	166977	1217	21.83'	15.03	5.44	0.041	3.9	clear
1400	167152	1392	21.83'	14.96	5.44	0.041	3.1	clear - (raise pump ~ 15')
1420	167326	1566	21.84'	14.91	5.43	0.041	2.7	clear - (lower pump ~ 15')
1435	167458	1698	21.83'	14.87	5.43	0.041	2.4	clear - collect sample
								*BP-BPOW5-3-052112 and stop development.

**BPOW 5-1, 5-2, and 5-3**  
**GROUNDWATER SAMPLE LOG SHEET**











**BPOW 5-1, 5-2, and 5-3**  
**CHAIN OF CUSTODY RECORD**



PROJECT NO: 112602751	FACILITY: Bethpage 042	PROJECT MANAGER Dave Brayock	PHONE NUMBER 757-461-3824	LABORATORY NAME AND CONTACT: CHEMTECH
SAMPLERS (SIGNATURE) <i>[Signature]</i>		FIELD OPERATIONS LEADER Vince Shickora	PHONE NUMBER 610-909-1893	ADDRESS 284 Sheffield St.
CARRIER/WAYBILL NUMBER # 8744 5964 0040			CITY, STATE Mountainside NJ 07092	

STANDARD TAT <input type="checkbox"/>	CONTAINER TYPE PLASTIC (P) or GLASS (G)
RUSH TAT <input type="checkbox"/>	PRESERVATIVE USED
<input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 72 hr. <input type="checkbox"/> 7 day <input type="checkbox"/> 14 day	

DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS	COMMENTS
5/21	0800	BP-TB-052112	TB	-	-	QC	G	2	VOCs (40 ml) 20C HCL	
5/21	1435	BP-BP0W5-3-052112	BP0W5-3	-	-	GW	G	2		After develop with pump (deep)
5/22	1300	BP-BP0W5-2-052212	BP0W5-2	-	-	GW	G	2		After develop with pump (intermediate)
5/23	1400	BP-BP0W5-1-052312	BP0W5-1	-	-	GW	G	2		After develop with pump (shallow)

1. RELINQUISHED BY <i>[Signature]</i>	DATE 5-23-12	TIME 1700	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY FedEx	DATE 5/24/12	TIME 9:40	3. RECEIVED BY <i>[Signature]</i>	DATE 5/24/12	TIME 9:40

COMMENTS: Temp: 4°C



**BPOW 5-1, 5-2, and 5-3**  
**ANALYTICAL DATA SHEETS**

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/21/12
Project:	Bethpage CTO-066	Date Received:	05/24/12
Client Sample ID:	BP-BPOW5-3-052112	SDG No.:	D2846
Lab Sample ID:	D2846-02	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG042739.D	1		05/25/12	VG052412

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
<b>TARGETS</b>							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	0.97	J	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	0.5	1	ug/L

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/21/12
Project:	Bethpage CTO-066	Date Received:	05/24/12
Client Sample ID:	BP-BPOW5-3-052112	SDG No.:	D2846
Lab Sample ID:	D2846-02	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG042739.D	1		05/25/12	VG052412

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.52	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
123-91-1	1,4-Dioxane	10	U	10	10	20	ug/L
<b>SURROGATES</b>							
17060-07-0	1,2-Dichloroethane-d4	52.1		70 - 120		104%	SPK: 50
1868-53-7	Dibromofluoromethane	47.1		85 - 115		94%	SPK: 50
2037-26-5	Toluene-d8	56.6		85 - 120		113%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.1		75 - 120		112%	SPK: 50
<b>INTERNAL STANDARDS</b>							
363-72-4	Pentafluorobenzene	2535540	3.81				
540-36-3	1,4-Difluorobenzene	3759200	4.58				
3114-55-4	Chlorobenzene-d5	3540540	9.57				
3855-82-1	1,4-Dichlorobenzene-d4	1696580	13.29				

### Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/22/12
Project:	Bethpage CTO-066	Date Received:	05/24/12
Client Sample ID:	BP-BPOW5-2-052212	SDG No.:	D2846
Lab Sample ID:	D2846-03	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG042738.D	1		05/25/12	VG052412

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
<b>TARGETS</b>							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	0.5	J	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	0.5	1	ug/L

### Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/22/12
Project:	Bethpage CTO-066	Date Received:	05/24/12
Client Sample ID:	BP-BPOW5-2-052212	SDG No.:	D2846
Lab Sample ID:	D2846-03	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG042738.D	1		05/25/12	VG052412

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.52	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
123-91-1	1,4-Dioxane	10	U	10	10	20	ug/L
<b>SURROGATES</b>							
17060-07-0	1,2-Dichloroethane-d4	54.5		70 - 120		109%	SPK: 50
1868-53-7	Dibromofluoromethane	46.2		85 - 115		92%	SPK: 50
2037-26-5	Toluene-d8	55.6		85 - 120		111%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.8		75 - 120		108%	SPK: 50
<b>INTERNAL STANDARDS</b>							
363-72-4	Pentafluorobenzene	2623430	3.8				
540-36-3	1,4-Difluorobenzene	3924970	4.58				
3114-55-4	Chlorobenzene-d5	3503920	9.57				
3855-82-1	1,4-Dichlorobenzene-d4	1693000	13.29				

## Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/23/12
Project:	Bethpage CTO-066	Date Received:	05/24/12
Client Sample ID:	BP-BPOW5-1-052312	SDG No.:	D2846
Lab Sample ID:	D2846-04	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG042737.D	1		05/25/12	VG052412

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
<b>TARGETS</b>							
75-71-8	Dichlorodifluoromethane	0.5	U	0.2	0.5	1	ug/L
74-87-3	Chloromethane	0.5	U	0.2	0.5	1	ug/L
75-01-4	Vinyl Chloride	0.5	U	0.34	0.5	1	ug/L
74-83-9	Bromomethane	0.5	U	0.2	0.5	1	ug/L
75-00-3	Chloroethane	0.5	U	0.2	0.5	1	ug/L
75-69-4	Trichlorofluoromethane	0.5	U	0.35	0.5	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.5	U	0.45	0.5	1	ug/L
75-35-4	1,1-Dichloroethene	0.5	U	0.47	0.5	1	ug/L
67-64-1	Acetone	2.5	U	0.5	2.5	5	ug/L
75-15-0	Carbon Disulfide	0.5	U	0.2	0.5	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.5	U	0.35	0.5	1	ug/L
79-20-9	Methyl Acetate	0.5	U	0.2	0.5	1	ug/L
75-09-2	Methylene Chloride	0.5	U	0.41	0.5	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.5	U	0.41	0.5	1	ug/L
75-34-3	1,1-Dichloroethane	0.5	U	0.36	0.5	1	ug/L
110-82-7	Cyclohexane	0.5	U	0.2	0.5	1	ug/L
78-93-3	2-Butanone	2.5	U	1.3	2.5	5	ug/L
56-23-5	Carbon Tetrachloride	0.5	U	0.2	0.5	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.5	U	0.35	0.5	1	ug/L
74-97-5	Bromochloromethane	0.5	U	0.2	0.5	1	ug/L
67-66-3	Chloroform	0.5	U	0.34	0.5	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.5	U	0.4	0.5	1	ug/L
108-87-2	Methylcyclohexane	0.5	U	0.2	0.5	1	ug/L
71-43-2	Benzene	0.5	U	0.32	0.5	1	ug/L
107-06-2	1,2-Dichloroethane	0.5	U	0.48	0.5	1	ug/L
79-01-6	Trichloroethene	0.5	U	0.28	0.5	1	ug/L
78-87-5	1,2-Dichloropropane	0.5	U	0.46	0.5	1	ug/L
75-27-4	Bromodichloromethane	0.5	U	0.36	0.5	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.5	U	2.1	2.5	5	ug/L
108-88-3	Toluene	0.49	J	0.37	0.5	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.5	U	0.29	0.5	1	ug/L

**Report of Analysis**

Client:	Tetra Tech NUS, Inc.	Date Collected:	05/23/12
Project:	Bethpage CTO-066	Date Received:	05/24/12
Client Sample ID:	BP-BPOW5-1-052312	SDG No.:	D2846
Lab Sample ID:	D2846-04	Matrix:	WATER
Analytical Method:	SW8260C	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG042737.D	1		05/25/12	VG052412

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.5	U	0.31	0.5	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.5	U	0.38	0.5	1	ug/L
591-78-6	2-Hexanone	2.5	U	1.9	2.5	5	ug/L
124-48-1	Dibromochloromethane	0.5	U	0.52	0.5	1	ug/L
106-93-4	1,2-Dibromoethane	0.5	U	0.41	0.5	1	ug/L
127-18-4	Tetrachloroethene	0.5	U	0.27	0.5	1	ug/L
108-90-7	Chlorobenzene	0.5	U	0.49	0.5	1	ug/L
100-41-4	Ethyl Benzene	0.5	U	0.2	0.5	1	ug/L
179601-23-1	m/p-Xylenes	1	U	0.95	1	2	ug/L
95-47-6	o-Xylene	0.5	U	0.43	0.5	1	ug/L
100-42-5	Styrene	0.5	U	0.36	0.5	1	ug/L
75-25-2	Bromoform	0.5	U	0.47	0.5	1	ug/L
98-82-8	Isopropylbenzene	0.5	U	0.45	0.5	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.5	U	0.31	0.5	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.5	U	0.43	0.5	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.5	U	0.32	0.5	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.5	U	0.45	0.5	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.5	U	0.46	0.5	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.5	U	0.2	0.5	1	ug/L
123-91-1	1,4-Dioxane	10	U	10	10	20	ug/L
<b>SURROGATES</b>							
17060-07-0	1,2-Dichloroethane-d4	51.8		70 - 120		104%	SPK: 50
1868-53-7	Dibromofluoromethane	44.4		85 - 115		89%	SPK: 50
2037-26-5	Toluene-d8	56.5		85 - 120		113%	SPK: 50
460-00-4	4-Bromofluorobenzene	55.4		75 - 120		111%	SPK: 50
<b>INTERNAL STANDARDS</b>							
363-72-4	Pentafluorobenzene	2611950	3.8				
540-36-3	1,4-Difluorobenzene	3893550	4.59				
3114-55-4	Chlorobenzene-d5	3662220	9.57				
3855-82-1	1,4-Dichlorobenzene-d4	1714300	13.29				

**BPOW 5-1, 5-2, and 5-3**  
**VALIDATION LETTER AND TABLE**





TO: D. BRAYACK  
SDG: D2846

PAGE: 2

The continuing calibration verification (CCV) percent differences (%D) were greater than the 20% quality control limit for carbon disulfide and acetone for instrument MSVOAG on 05/25/12 @ 13:05.

**Affected sample:** BP-TB-0521128

**Action:** The sample BP-TB-0521128 non-detected results for carbon disulfide and acetone were qualified estimated, (UJ).

Positive results below the limit of quantitation (LOQ) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

### **ADDITIONAL COMMENTS**

The laboratory control sample (LCS)/LCS duplicate (LCSD) relative percent difference (RPD) was greater than the quality control limit for carbon disulfide for batch VBG0525W1. No validation action was taken for a RPD non-compliance alone.

Fifty-two (52) analytes were reported for VOCs.

Non-detected sample results were reported to the LOD.

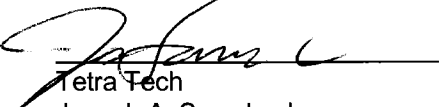
### **EXECUTIVE SUMMARY**

**Laboratory Performance Issues:** All sample 1,4-dioxane results were rejected for RRF criteria non-compliances. Sample VOC results were qualified for CCV %D quality control limit non-compliances.

**Other Factors Affecting Data Quality:** Positive results below the limit of quantitation (LOQ) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA SW-846 Method 8260B, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP HW-24 Revision #2 August 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

  
Tetra Tech  
Joseph Kalinyak  
Chemist/Data Validator

  
Tetra Tech  
Joseph A. Samchuck  
Data Validation Quality Assurance Officer

#### Attachments:

- Appendix A - Qualified Analytical Results
- Appendix B - Results as Reported by the Laboratory
- Appendix C - Region II Data Validation Forms
- Appendix D - Support Documentation

**Appendix A**

Qualified Analytical Results

### **Value Qualifier Key (Val Qual)**

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

### **DATA QUALIFICATION CODE (QUAL CODE)**

#### **Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times$  IDL for inorganics and  $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e. chromatography, interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $>40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $<30\%$
- Z = Uncertainty at 2 sigma deviation is less than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE	0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE	10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE	2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE	2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE	2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE	2.5	U		2.5	U		2.5	U		2.5	UJ	C
BENZENE	0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM	0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE	0.5	U		0.5	U		0.5	U		0.5	UJ	C
CARBON TETRACHLORIDE	0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE	0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM	0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE	0.5	U		0.5	U		0.5	U		0.5	U	

<b>PROJ_NO: 02751</b> <b>SDG: D2846</b> <b>FRACTION: OV</b> <b>MEDIA: WATER</b>	NSAMPLE	BP-BPOW5-1-052312			BP-BPOW5-2-052212			BP-BPOW5-3-052112			BP-TB-052112		
	LAB_ID	D2846-04			D2846-03			D2846-02			D2846-01		
	SAMP_DATE	5/23/2012			5/22/2012			5/21/2012			5/21/2012		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
DICHLORODIFLUOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
ETHYLBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
ISOPROPYLBENZENE	0.5	U		0.5	U		0.5	U		0.5	U		
M+P-XYLENES	1	U		1	U		1	U		1	U		
METHYL ACETATE	0.5	U		0.5	U		0.5	U		0.5	U		
METHYL CYCLOHEXANE	0.5	U		0.5	U		0.5	U		0.5	U		
METHYL TERT-BUTYL ETHER	0.5	U		0.5	U		0.5	U		0.5	U		
METHYLENE CHLORIDE	0.5	U		0.5	U		0.5	U		0.5	U		
O-XYLENE	0.5	U		0.5	U		0.5	U		0.5	U		
STYRENE	0.5	U		0.5	U		0.5	U		0.5	U		
TETRACHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
TOLUENE	0.49	J	P	0.5	J	P	0.97	J	P	0.5	U		
TRANS-1,2-DICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRANS-1,3-DICHLOROPROPENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRICHLOROETHENE	0.5	U		0.5	U		0.5	U		0.5	U		
TRICHLOROFLUOROMETHANE	0.5	U		0.5	U		0.5	U		0.5	U		
VINYL CHLORIDE	0.5	U		0.5	U		0.5	U		0.5	U		

**Section 9**  
**Survey**



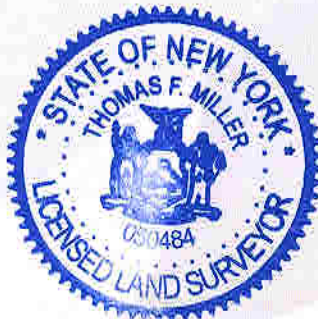
WELL #'s BPOW 05-01, BPOW 05-02 & BPOW 05-03  
 EASEMENT DESCRIPTION

BEING all that certain plot, piece or parcel of land lying within Seaford, Town of Hempstead, County of Nassau, State of New York; said plot being along the easterly side of Kildare Crescent at its southerly terminus. Said southerly terminus of Kildare Crescent lying northwest of and adjacent to the Seaford-Oyster Bay Expressway and more particularly described as follows:

BEGINNING for the same at a point distant South 07°13'44" East, 16,010.605 feet from a geodetic monument found, know and designated as Monument Number 15E 14N (PID# KU5039) having a geographic coordinate of 40 45 13.49016(N), 073 29 29.50713(W) (NAD83-2007) and a New York State Plane (NYSPC) Long Island Zone, North American Datum of 1983 (NAD83) coordinate of North 65,317.552 meters East 342,938.662 meters (N 214,296.002 feet E 1,125,124.594 feet). Said point of beginning having a coordinate, as referenced to New York State Plane Coordinates (NYSPC) Long Island zone, North American Datum of 1983 (NAD83) of North 198,412.67 feet and East 1,127,139.29 feet and running thence in, through, over and across the lands as described, the four (4) following courses and distances:

- (1) North 79° 06' 42" East 21.00 feet thence;
- (2) South 10° 53' 18" East, 30.00 feet thence;
- (3) South 79° 06' 42" West, 21.00 feet thence;
- (4) North 10° 53' 18" West, 30.00 feet to the point and place of beginning.

Containing 630 square feet or 0.014 acre of land more or less.



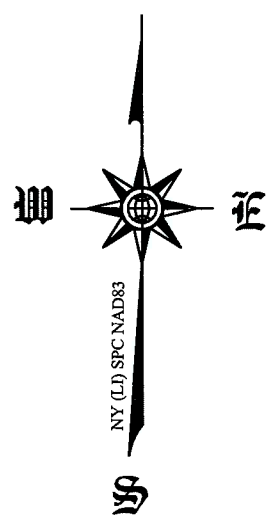
*Thomas F. Miller*

9/19/12

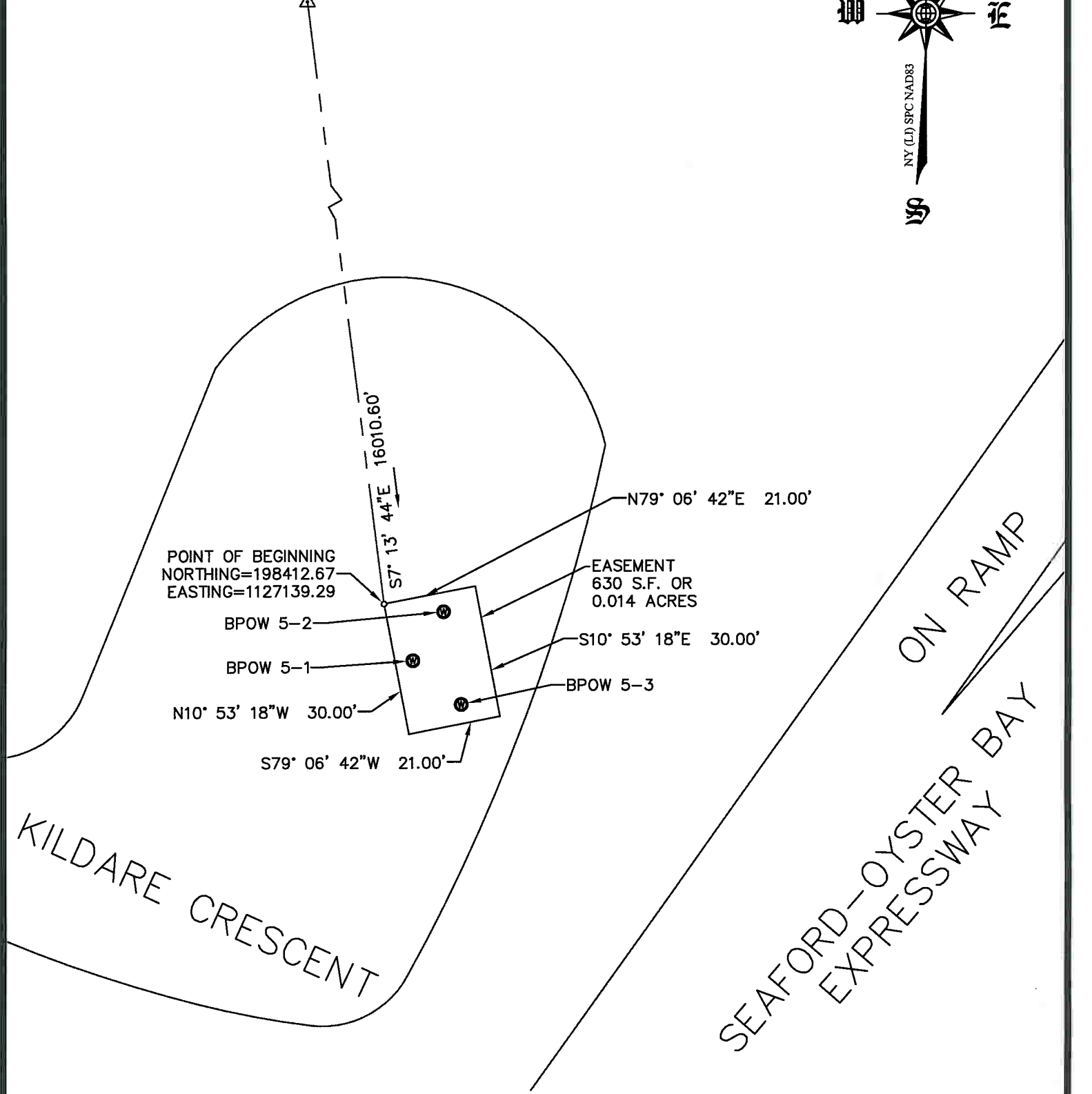
Thomas F. Miller, PLS, PP                      Date  
 State of New York Professional Land Surveyor  
 License No. 050484



N



MONUMENT 15E 14N  
NORTHING=214296.00  
EASTING=1125124.59



POINT OF BEGINNING  
NORTHING=198412.67  
EASTING=1127139.29

EASEMENT  
630 S.F. OR  
0.014 ACRES

BPOW 5-2

BPOW 5-1

S10° 53' 18"E 30.00'

BPOW 5-3

N10° 53' 18"W 30.00'

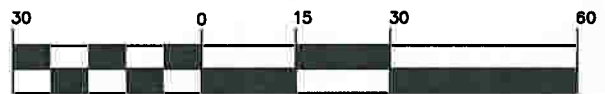
S79° 06' 42"W 21.00'

N79° 06' 42"E 21.00'

KILDARE CRESCENT

ON RAMP  
SEAFORD-OYSTER BAY  
EXPRESSWAY

GRAPHIC SCALE

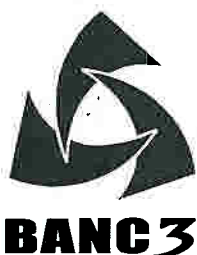


( IN FEET )

1 inch = 30 ft.

The Survey was performed without the benefit of a Title Report and may not show all easements or encumbrances recorded or unrecorded.

No responsibility or liability is assumed by the surveyor for location of utilities and easements, if any, shown below the surfaces of lands or not visible on the surface of the lands shown hereon.

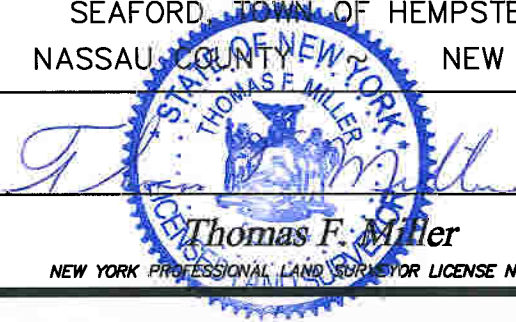


**BANC 3, INC., P.C.**  
Consulting Engineers

300 ALEXANDER PARK, SUITE 350  
PRINCETON, NEW JERSEY 08540  
PHONE:(609) 759-1900 ~ FAX:(609) 919-9022

**NWIRP BETHPAGE**

21' X 30' WELL EASEMENT  
N/F COUNTY OF NASSAU  
SEAFORD, TOWN OF HEMPSTEAD  
NASSAU COUNTY NEW YORK NEW YORK



PROJECT MANAGER: TM	DRAWN: AJW	CHECKED: TM
DATE: 09/19/12	SCALE: 1" = 30'	PROJECT NO.: 2000215-04

NEW YORK PROFESSIONAL LAND SURVEYOR LICENSE No. 050484

PT #	GRID NORTHING (US FT)	GRID EASTING (US FT)	ELEV (US FT)	CODE / DESCRIPTION
<b>LOCATION 6</b>	(SEPT. 2012)			
2503	198399.790	1127145.842	49.09	BPOW 05-01
2500	198399.389	1127145.573	49.73	GROUND
2504	198410.857	1127152.768	49.28	BPOW 05-02
2501	198410.416	1127152.321	49.78	GROUND
2505	198389.891	1127156.801	48.99	BPOW 05-03
2502	198390.115	1127157.194	49.41	GROUND